

‘Space Alone Persistently Determines’:

**The roles and relations of time and
space in Kant and Meillassoux.**

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Abstract

This thesis addresses the criticism of the philosophy of Immanuel Kant put forward by Quentin Meillassoux under the charge of ‘correlationism.’ It uses Meillassoux’s interpretation of Kant as a starting point to develop an alternative interpretation in which space plays a central role within Kant’s thought, thus contributing to the wider philosophy of space.

The argument progresses through an analysis of the three stages of dogmatism, skepticism and Criticism, which are central to Kant’s thought and which Meillassoux attempts to circumvent. It demonstrates how Kant develops his Critical philosophy through a rejection of dogmatism as a commitment to the principle of sufficient reason, which is reconfigured using the insights of Hume’s skepticism. Thus the system outlined in the *Critique of Pure Reason* is at heart a temporal philosophy, in which the principle of sufficient reason is reconceptualized in terms of the issue of time-determination. Meillassoux’s alternative system of ‘speculative materialism,’ it is argued, proceeds along the same path: Criticizing the principle of sufficient reason and reconfiguring it through the insights of Hume’s skeptical problematization of induction, in order to assert a temporal philosophy based upon the ‘hyper-chaos’ of the ‘principle of unreason.’ However, with this unexpected parallel between Kant and Meillassoux in regard to the issue of time, the problematic role of space also becomes apparent. Meillassoux’s temporal philosophy is disrupted by his use of the spatial metaphor to fully express the features of time that he sets out, and thus space becomes a point of tension within his temporal system of ‘speculative materialism.’ Working back through the parallel between Meillassoux and Kant reveals that the role of space and its connection to time is also a problematic point of tension within Kant’s Critical philosophy and one that is central to his reworking of the *Critique of Pure Reason* for the 1787 B-Edition. Thus, through a detailed interpretation of the Critical philosophy, and especially its role in the Refutation of Idealism added to the B-Edition, the centrality of space within Kant’s system is reasserted and evaluated. This recognition of the importance of space and its relation to time within Kant’s system also provides the means to reassess Meillassoux’s criticism of Kant as a ‘correlationist’ and recast the debate between idealism and realism in the history of post-Kantian philosophy terms of the roles and relations of time and space.

A Note on References

All references to the works of Kant, and from his correspondences and notes, quote from the Cambridge University Press editions of his complete writings (see the Bibliography for specific volumes). However, I have followed the convention of referencing the volume and page of the so-called *Akademie Ausgabe*, the standard German edition of Kant's works, *Kant's Gesammelte Schriften*, edited by the Royal Prussian (later German) Academy of Sciences (Berlin: Georg Reimer, later Walter deGruyter & Co., 1900-), except in the case of the *Critique of Pure Reason*, where I have followed the convention of giving the pages numbers of the original A- and B- Editions of 1781 and 1787.

Unless explicitly noted, all emphases, either bold or italic, in quotations are those of the quoted author. Some sections quoted from the *Reflexionen*, Kant's handwritten notes, contain words that Kant crossed out but are still legible, these are represented here by using a line struck through the words (~~for example~~).

Occasionally the French terms and neologisms that Meillassoux uses are quoted alongside their English translations, in such cases the page number of the French edition of *Après La Finitude* (2006) are provided in square brackets. Similarly, quotes from Heidegger are given with the page number of the translation quoted and also, if available, the page number of the relevant German original in square brackets.

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Chapter 1. Introduction

The argument of this thesis consists of two interconnected elements. The first is an argument for the centrality of space in terms of its co-implication with time within the work, interpretation and philosophical legacy of Immanuel Kant. Space, it is argued, has often been overlooked because many interpretations of Kant, and further philosophical developments from his thought, focus on the role of time within his system; and while time is undoubtedly an important element of the Critical philosophy it is, it is argued, actually always connected to space to such an extent that one cannot be put forward without the other at the risk of misunderstanding, or at least misrepresenting, the whole of Kant's thought. In addition to being hidden by a prioritization of time, space in Kant is further obscured by the myriad of ways in which he discusses it, and elaborating the importance of space for Kant also involves clarifying the differences and connections between the different modes of space in Kant. These include, the sense of physical extension or abstract geometry, the geographical ideas and metaphors that Kant often uses, and a more fundamental spatiality, or 'spacing,' within the conceptual frameworks and relations of ideas that Kant develops. The argument for the centrality of space in Kant is not, however, pursued through a direct engagement with Kant alone. Instead, and this is the second element of the thesis, it is explicated through a critical examination of the work of Quentin Meillassoux, with a particular focus on his interpretation, and ultimately his rejection of Kant. It is precisely because of his rejection of Kant and indeed the Kantian legacy within contemporary philosophy, that Meillassoux is one of the most significant critics of Kant of the last 10 years. His engagement with Kant is important for two reasons. On the one hand, he examines the central elements of Kant's Critical philosophy, both in terms of the positive system of transcendental idealism and also Kant's critique of the philosophy of his time (especially what Kant examines under the titles of dogmatism and skepticism), which makes his analysis a good starting point to reassess Kant himself. On the other hand, however, Meillassoux's own interpretation and criticism of Kant, and the system that he develops in order to replace Kant, is not entirely unproblematic, and these problems arise at least in part because Meillassoux emphasizes time at the expense of space. The ignoring of space and the prioritization of time in both Meillassoux's interpretation of Kant and his own positive philosophical

system, and the consequent problems that arise from this disregard of the role of space in Kant, underscores the initial argument concerning space in Kant. It also provides details about how the importance of space in Kant has been overlooked due to an emphasis on the role of time, which is the core of the argument that concerns Kant alone. The thesis thus proceeds through a close engagement with Meillassoux and Kant, using the arguments of the former to explicate and reassess those of the latter without necessarily endorsing either side of the antipathy between the two (or at least from Meillassoux towards Kant). In underscoring and clarifying the central role of space in both Meillassoux and Kant this thesis is thus part of the philosophical project that emphasizes the important and often unarticulated role of space in both the history of philosophy and the philosophical understanding of the world and knowledge.

§1.1. Meillassoux as a Critic of Kant

Although Meillassoux's interpretation of Kant is highly critical and as such is also contentious, it is precisely these features that mean it is important to engage with it closely and hold it up to scrutiny. Its critical, and even polemical, nature also means that there is a lot of scope for positioning it within and against the more dominant interpretations of Kant and the details of Kant's own development and system; and it is through this confrontation that the argument for the importance of space within Kant develops. The importance and influence of Meillassoux is most commonly asserted precisely in terms of his antipathy towards Kant and the Kantian legacy within continental philosophy (although he maintains that this legacy is also present in Analytic philosophy (2008a 6, 41)). Meillassoux sets out his criticism of Kant in *After Finitude: An Essay on the Necessity of Contingency* (2008a, originally published in French in 2006), a book that Catherine Malabou claims has "has provoked a genuine thunderstorm in the philosophical sky" (2014, 242). Similarly, Peter Hallward praises *After Finitude* for being "exceptionally clear and concise, entirely devoted to a single chain of reasoning," and observes that "it's easy to see why Meillassoux's *After Finitude* has so quickly acquired something close to cult status among some readers

who share his lack of reverence for ‘the way things are’” (2011, 131).¹ Tom Sparrow elaborates on the nature of this ‘cult status’ as he reflects on an early encounter with *After Finitude* and recalls that there “was an air of subversion to our discussion and I was reminded of what attracted me to philosophy in the first place,” before speculating that, “I suspect that many readers of Meillassoux’s little book are similarly reminded, and this in part explains its rapid success” (2014, 87). In his critical engagement with Meillassoux in *Less Than Zero*, Slavoj Žižek provides more detail about Meillassoux’s positive arguments, writing that, “Quentin Meillassoux, in his *After Finitude*, made a forceful return to the ‘naïve’ question of the existence and cognizability of reality in its independence from our (human) mind” (2012, 625). Žižek praises the “many wonderful lines of thought in *After Finitude*” (628), as well as their “beauty and strength” (629), but is quick to situate Meillassoux’s positive project in light of his analysis of “the mistake inherent in the Kantian criticism” (627). The influence of Meillassoux’s criticism of Kant also extends beyond works that engage primarily with Meillassoux. Most prominently this is in terms of the recent area of philosophy that is largely grouped together under the name of ‘speculative realism.’

The name ‘speculative realism’ comes from a workshop of that title held at Goldsmiths College in April 2007 where Meillassoux presented many of the ideas and arguments contained in *After Finitude*. The other presenters were Ray Brassier, Graham Harman and Iain Hamilton Grant, and a transcription of the event was published soon afterwards under the same title in the journal *Collapse* (see Meillassoux 2007). The ‘speculative’ element of the name is taken from the positive argument that Meillassoux puts forward in *After Finitude*, which he terms ‘speculative materialism’ (2008a, 121) as it concerns knowledge of the existence of a material world independent of any empirical knowledge of it, that is ascertained through speculative reason alone (see Harman 2013, 5). As this nominal derivation suggests, there is a very close connection between the work of Meillassoux and ‘speculative realism.’ In the Introduction to one of the early edited volumes on ‘speculative realism,’ 2011’s *The Speculative Turn*, the editors even go so far as to suggest that *After Finitude* “might be called the trigger for

¹ See also Malabou’s detailed engagement with Meillassoux in *Before Tomorrow: Epigenesis and Rationality* (2016), where she describes *After Finitude* as a “thunderbolt” (2) that raises the question of the ‘relinquishing of the transcendental’ and thus of “Kant’s future” (xiv).

the Speculative Realist movement” (8). The unity between several divergent thinkers that was once suggested by the term ‘speculative realism’ has since dissipated, or perhaps never existed in the first place, but this does not stop the original four thinkers of the Goldsmiths Seminar, nor numerous others who have followed, from still being grouped and considered together under that title (see Gratton 2014, 1-11 for an overview). Unfortunately, this grouping together often means that these thinkers are considered primarily in their relation to each other and to their position as part of that group (again, see Gratton 2014 for an example). This overly-schematic, or even dogmatic, consideration of ‘speculative realism’ as a whole, or only within the context of that whole, often obscures the detail of individual thinkers within that grouping, and prevents a more in-depth engagement with the particularities of their arguments. For this reason, the present thesis is not overly concerned with the positioning of Meillassoux within the heterogeneous area of thought subsumed under the title ‘speculative realism,’ but is more interested in the details of Meillassoux’s own arguments and especially his interpretation of Kant. Somewhat ironically, Meillassoux’s interpretation and criticism of Kant is possibly the only remaining constant across the many different branches of thought that grew out of ‘speculative realism.’ In reassessing what is meant by ‘speculative realism’ Graham Harman observes that it is “an extremely broad term. All it takes to be a speculative realist is to be opposed to ‘correlationism,’ Meillassoux’s term for the sort of philosophy (still dominant today) that bases all philosophy on the mutual interplay of human and world” (2013, 5). Similarly, Ray Brassier, who is now a critic of both the name and the unity of ‘speculative realism,’ has observed that “the only thing that unites us is antipathy to what Quentin Meillassoux calls ‘correlationism’—the doctrine, especially prevalent among ‘Continental’ philosophers, that humans and world cannot be conceived in isolation from one other [*sic*]” (quoted in Ennis 2011, 55). Finally, this claim is reasserted in the Introduction to a particularly recent overview of, as the title puts it, the *Genealogies of Speculation* (2016), where the editors, Avanesian and Malik, observe that, “it is Meillassoux’s term correlationism that more or less unifies the otherwise discrepant philosophies gathered under the term [‘speculative realism’] by identifying the condition upon which the thereby common adversary operates” (10). It is precisely this, Meillassoux’s fundamental criticism of Kant prosecuted through his argument against ‘correlationism,’ that is the most important influence and impact of Meillassoux’s work; and thus it is also the focus of this thesis, but not in terms of the

role of that argument within the wider discourse of ‘speculative realism.’ Instead, this thesis critically examines Meillassoux’s interpretation and criticism of Kant in order to show how this criticism remains problematic due to its neglect of space brought about by its emphasis on time, which in turn, will be used to argue for the centrality of space and its *co-implication* with time within Kant’s own thought.

In *After Finitude* Meillassoux criticizes Kant’s intervention in the history of philosophy a “catastrophe” (124), a polemical word that nonetheless reveals the importance of Kant’s influence on philosophy. Furthermore, in Meillassoux’s analysis, the consequences of Kant’s ‘catastrophic’ intervention in philosophy still dominate philosophical thought today under the guise of what he terms ‘correlationism,’ which he describes as the “exacerbated consequence” of the Kantian ‘catastrophe’ (124), and the “central notion of modern philosophy since Kant” (5). As briefly touched upon above, with the term ‘correlationism’ Meillassoux characterizes and refers to philosophical doctrines that assert that the world and the subject can only be given in relation to each other, in terms of their correlation, and thus that the reality of an independent or absolute world is at least inaccessible to thought or knowledge and at most non-existent. Ultimately, Meillassoux’s aim is to overturn the ‘catastrophe’ of ‘correlationism’ and thus escape the influence of Kant by “waking us from our correlationist slumber,” as he paraphrases Kant’s own awakening from dogmatism, and “enjoining us to reconcile thought and absolute” (128—this concludes the final sentence of *After Finitude*). Already, even within this brief précis of Meillassoux’s argument, there emerges a tension in his position against Kant insofar as he aims to abandon the philosophy that is oriented by Kant, and yet in doing so he is also explicitly oriented by his negative position in relation to that philosophy and thereby to Kant. It is this tension that makes the engagement between Meillassoux and Kant particularly fruitful for examining and explicating the details of Kant’s philosophy.²

² The present thesis uses Meillassoux’s contentious interpretation of Kant, including the problems in that interpretation, as the means through which to open up an alternative interpretation of Kant. For a less charitable analysis of Meillassoux and the problems, misinterpretations and oversights involved in *After Finitude* see David Golumbia’s “‘Correlationism’: The Dogma that Never Was’ (2016).

§1.2. The ‘Canonical Distinction’: Dogmatism, Skepticism and Critique

Emphasizing the rejection of Kant that it contains, Alain Badiou writes in his Preface for *After Finitude*, that with it Meillassoux “has opened up a new path in the history of philosophy ... a path that circumvents Kant’s canonical distinction between ‘dogmatism’, ‘skepticism’ and ‘critique’” (vii).³ However, despite Badiou’s insistence on its avoidance, this distinction is actually very useful for assessing and critiquing Meillassoux’s interpretation of Kant. Kant clearly sets out the ‘canonical distinction’ in an essay titled *What Real Progress has Metaphysics Made in Germany Since the Time of Leibniz and Wolff*, written in the years preceding his death but only published posthumously. He writes: “There are therefore three stages which philosophy had to traverse in its approach to metaphysics. The first was the stage of dogmatism; the second that of skepticism; and the third that of the criticism of pure reason” (20: 264). While the last of these—the criticism of pure reason—is most obviously associated with Kant’s own philosophy, what such a quick identification conceals is the way in which he also engaged with, and indeed passed through, the preceding stages of dogmatism and skepticism in order to be able to achieve his Critical endpoint. These two preceding stages also set the scene for the emergence of Kant’s own Critical philosophy in the Preface of the A-Edition of the *Critique of Pure Reason*.⁴ Here, Kant

³ Some of Meillassoux’s antipathy towards Kant and toward finitude is inherited from Badiou, his former teacher. In *Logics of Worlds*, Badiou admits that, “Kant is the one author for whom I cannot feel any kinship ... Kant is the inventor of the disastrous theme of our ‘finitude’. The solemn and sanctimonious declaration that we can have no knowledge of this or that ... [Kant is] a great Watchman whose gaze you cannot escape, and who you can’t help fearing will entrap you into ‘demonstrating’ your speculative guilt, your metaphysical madness” (535-6).

⁴ The A-Edition Preface emphasizes the *critical* element of the book, i.e., the arguments of the Dialectic, much more than that of the B-Edition, which emphasizes how the positive system of transcendental idealism aligns itself with scientific realism and against idealism. The undertaking to re-write the *Critique* was prompted by the publication of a review of the A-Edition that was published in the *Zugabe zu den Göttingen gelehrte Anzeigen* in 1782 (henceforth the *Göttingen Review*). Although the exact authorship of the review is complicated (it was initially written by Christian Garve a Berlin *Aufklärer* sympathetic to Kant, but the published version was heavily edited by J.G. Feder, who transformed it into a rather more polemical piece), the central critique of Kant is fairly simple. It presents Kant’s transcendental idealism as just another version of Berkeley’s subjective idealism, with all the associated problems. As a result of this review Kant began a defense of his transcendental idealism, starting with the addition of an appendix to the partly written *Prolegomena* (published 1783), which explicitly addressed the review and the problem of Berkeleyian idealism (4: 365-83) and then the substantial rewriting of the *Critique* that resulted in the 1787 B-Edition. In both

outlines the limitations of reason as it falls into unresolvable contradictions and traces the path of metaphysics from the ‘despotic’ rule of the dogmatists and the ‘anarchy’ of the skeptics, to the ‘court’ of pure reason that “may secure its [reason’s] rightful claims, while dismissing all its groundless pretensions” (Axi). The Critical project that Kant pursues from that point onwards, and which results in the ongoing development of transcendental idealism, is then an overcoming of the previous dogmatic and skeptical stages of philosophy. The *Critique of Pure Reason* thus contains both Kant’s criticism of reason itself by itself and thus of the dogmatic metaphysics that it produces—the negative side of the project contained in the Transcendental Dialectic—and his positive response to this, the construction of the system of transcendental idealism, that can provide the legitimate use of reason and thus resist falling prey to the ‘anarchy’ of skepticism. What these discussions of the distinction do not show is that way that Kant himself passed through the first two stages of philosophy in order to develop the third, and how understanding this context of Kant’s development is essential to any interpretation, or rejection, of his philosophy.

Despite his criticism of Kant and Badiou’s assertion of his avoidance of Kant’s ‘canonical distinction,’ Meillassoux does examine Kant’s intervention in philosophy in terms of dogmatism and skepticism, and recognizing this is useful in examining and analyzing Kant’s intervention in terms of the importance of time and space in his thought. Meillassoux discusses what he calls the ‘Kant event’ (2008a, 125) in terms of the historical and philosophical distinction between dogmatism and skepticism and Kant’s Critical rejection of both in the *Critique of Pure Reason* (2008a, 118). On the first side of this distinction, Meillassoux acknowledges Kant’s destruction of dogmatic rationalist metaphysics and it is in terms of this that he recognizes that “we cannot but be heirs of Kantianism” (2008a, 29). He characterizes this destruction in terms of the rejection of “the principle of sufficient reason, as well as the ontological argument, which is the keystone that allows the system of real necessity to close in on itself”

the *Prolegomena* and the B-Edition, specifically in the Preface, both the influence of Hume and the connection to science—Kant explicitly mentions Bacon, Galileo and others beside Copernicus—are emphasized in contrast to their conspicuous absence in the A-Edition. Kant also completely rewrote the Transcendental Deduction of the Categories and added in several sections including an explicit Refutation of Idealism (which was essentially the Fourth Paralogism of the A-Edition moved from the Dialectic to the Analytic). The changes between the two Editions of the *Critique* are addressed in Chapter 5 below. For a brief summary of the contents and controversy of the *Göttingen Review* see Beiser, 2002, 88-92.

(2008a, 33). The second, skeptical side of Meillassoux's 'Kant event' is also concerned with the rejection of the principle of sufficient reason, but in this case he identifies Kant's confrontation with Hume and the problem of induction as the means through which Kant is prompted to make this rejection (2008a, 125). Meillassoux endorses the rejection of the principle of sufficient reason, but not the argument that Kant erects in the place of dogmatic metaphysics and skeptical irresolution. He identifies this argument as the one that Kant puts forward in the transcendental deduction (2008a, 88-9), and it is this argument that he rejects as the root of 'correlationism.' However, Meillassoux's characterization of Kant is somewhat problematic in several ways. Firstly, Kant's engagement with dogmatic metaphysics and the principle of sufficient reason is not solely focused on the ontological argument, nor is it a problem that is only addressed in the *Critique of Pure Reason*. Indeed, as was appropriate for the philosophical context in which Kant worked, with its canon of Leibniz and Wolff, Kant was engaged with the issues that are now defined as dogmatism from the very start of his philosophical career. Secondly, Kant's full Critical rejection of dogmatism and his reconfiguration of the principle of sufficient reason and resolution of Hume's problematization of causality takes place not in the Deduction but in the Second Analogy of Experience (A188-211/B232-56).

These two problematic points within Meillassoux's interpretation of Kant provide the starting points and structure for the interpretation of Kant via Meillassoux undertaken in this thesis. Meillassoux unequivocally endorses Kant's destruction of dogmatism and dogmatic metaphysics through the rejection of the ontological argument and the principle of sufficient reason. However, while Meillassoux asserts that this rejection takes place in the *Critique of Pure Reason* Kant's engagement with dogmatism, and his progression towards its rejection, is in fact already present in some of his earliest works—most notably 1755's *New Elucidation*—long before the details of the Critical system began to develop. The particulars of his gradual progression through dogmatism through first a redefinition of the principle of sufficient reason [*Grund*] and then a complete critique of the faculty of reason [*Vernunft*] are very useful for understanding the later Critical system and transcendental idealism. The key to Kant's confrontation with skepticism, and its important influence on his development, is also contained within this redefinition of the principle of sufficient reason. Kant's criticism of the principle of sufficient reason is based around the equivocation between reason

as cause and reason as understanding (i.e., as an epistemological ‘why’). His initial reconfiguration of the principle of sufficient reason is to define it as concerned with causes alone and purge the epistemological sense of reason. In restricting the principle of sufficient reason to the issue of causation, however, Kant also must confront the issues that arise from Hume’s skeptical critique of induction and causation. Kant presents his complete Critical reconfiguration of the principle of sufficient reason and his answer to Hume’s skeptical problems in the Second Analogy of experience in the *Critique of Pure Reason*. Here, Kant ties the issue of causation, and thus of cause in terms of the principle of sufficient reason, to the determination of time as succession. The issue of time-determination is one that is central to Kant’s system of transcendental idealism, although it is not alone in its centrality as ultimately it must always be considered alongside space. But it is in the importance of time and its relation to the resolution of Hume’s skeptical challenge to induction and causation, that some unexpected similarities between Kant and Meillassoux develop.

§1.3. Meillassoux’s Temporal Philosophy

Somewhat curiously, given his antipathy to Kant, the philosophical system that Meillassoux constructs after the “relinquishing of transcendentalism [*l’abandon du transcendental*]” (27: [38]) that he advocates is also one that focuses on time. In order to draw out the properly temporal core of the system that Meillassoux develops in *After Finitude* it is also necessary to examine the overall project of that work. The already-quoted final lines of the book neatly summarize the basic argument: “the problem of ancestrality succeeds in waking us from our correlationist slumber, by enjoining us to reconcile thought and absolute” (128). Here are some of the central elements of Meillassoux’s arguments: the ‘correlationist’ anti-realism that he sets himself against; the challenge of ‘ancestrality,’ which he uses both to expose the idealist underpinnings of ‘correlationism’ and also as the means through which he tests the tenets of any realism (can it think the non-correlated events and artifacts of a time anterior to the emergence of all subjectivity); and finally, the real core of the problem that realism must confront, how is it possible to think an absolute that is not merely a

manifestation of our own thoughts, but rather something that is necessarily *not* only possible as a correlation of our thought of it.

Ultimately, the absolute that Meillassoux argues he has proved in *After Finitude* is itself *time*, albeit a sense of time that is not the standard everyday conception of time—he says that it is “a Time that is inconceivable for physics” (64). Instead it is a time that he refers to as “hyper-chaos [*hyper-Chaos*],” (64: [87]) which is revealed through the “principle of unreason [*principe d’irraison*]” (60: [82]) or “facticity [*factualité*]” (79: [107]),⁵ which he, like Kant, constructs in place of the rejected principle of sufficient reason and via an analysis of Hume’s problem of induction. He argues that this principle of unreason is revealed through the absolutization of the contingency of facticity (the fact of the correlation of subject and object) put forward by the ‘correlationists’ themselves (37). It is an ontological consequence of Hume’s insight into the inability for reason to think necessity in experience. Meillassoux asserts that the true insight of Hume’s argument is that the world itself is irrational, not merely because reason is limited along the lines thought through so thoroughly by Kant. Already in this preliminary sketch of Meillassoux’s position the similarities and divergences from Kant’s position, and the Kantian position of much of the tradition of philosophy, can be seen. While Kant, and his Critical reconfiguration of the principle of sufficient reason and the system of transcendental idealism, does seem to tie together the subject and object in precisely the way that Meillassoux denounces as ‘correlationism,’ Meillassoux by contrast puts forward time as the fundamental and absolute feature of the world as it is distinct from any relation to the subject, but still as something thinkable by the subject in that distinction. However, it is in this aim that some of the disruptive influences of spatiality begin to appear within Meillassoux’s system. These influences are not as explicit as the treatment of time, but this makes their close examination all the more important.

§1.4. The Disruption of Space in Meillassoux

⁵ On the translation of this neologism (developed as a response to the prominence of ‘facticity’ in phenomenological, i.e., ‘correlationist,’ thought) see the translator’s note in *After Finitude*, 133n.6 as well as the discussion in Chapter 3 below.

Examining exactly how space becomes a disruptive element in Meillassoux provides a conceptual framework through which, via the parallels between the two, the issue of spatiality in the thought of Kant himself can be addressed, examined, analyzed and explicated in detail and the full scope of its centrality (in its co-implication with time) within his Critical philosophy asserted. It has already been noted how the thesis of *After Finitude* is not primarily put forward as one explicitly concerned with time, although time does end up being an important and central element within its system. Similarly, space *as space* is not thematized in *After Finitude* in any way, rather it only appears under a metaphorical guise—both explicitly and implicitly—and thus more work must be done in order to reveal its disruptive presence.

The most evident, and problematic, appearances of spatiality in *After Finitude* comes with the connection that Meillassoux makes, both metaphorically and literally, between realism and space. Early on he expresses the independent reality that he argues for as the “*great outdoors*” and as a “foreign territory” that is “entirely elsewhere” (7). All of these poetic and metaphorical evocations of reality are in contrast to the reality that he does assert, namely the time of ‘hyper-chaos.’ They are, however, consistent with a different characterization that Meillassoux gives of this reality as the “world of Cartesian extension”, one that “acquires the independence of substance” (115). Such extension is the pure geometrical homogeneity of absolute space, and as such connects up with Meillassoux argument that the world of reality independent of subjectivity is one that is mathematizable.

Once again the relation between this spatiality of homogenous extension and the ‘hyper-chaos’ of time is not fully developed. However, there is an implicit parallel between the two. In *After Finitude*, Meillassoux presents ‘hyper-chaos’ as time because it is only as time that the eternal unity of the diversity of such chaos can be considered (64). This time, considered as eternal and unified throughout all changes that occur within it, is, like absolute space, eternal and undifferentiated. But once again, this possible similarity or connection between time and space is left undiscussed and undetermined. It becomes pertinent, however, when it is contrasted with another emergence of the spatial metaphor in Meillassoux, in this case one that is directly made between space and time. When he sets out the challenge of ‘ancestrality’ by discussing events anterior to the existence of human subjectivity and questioning how the existence of such events is considered and conceptualized by either

‘correlationism’ or realism, Meillassoux directly uses a spatial metaphor to evoke these events of the distant past. He writes,

It’s just a line. It can have different shades, a little like a spectrum of colours separated by short vertical dashes. Above these are numbers indicating immense quantities. It’s a line the like of which one finds in any work of scientific popularization. The numbers designate dates ... (9).

The dates on the line represent the events of the distant past such as “the date of the origin of the universe (13.5 billion years ago)” (9). The line here represents time and its direction and distance from the present, now unambiguously using the spatial metaphor to elucidate the time of the ‘ancestral.’ And yet, through this metaphor this time is now oriented in a way that the empty homogenous time of ‘hyper-chaos’ cannot be—its ‘absolute’ nature was compared directly to the empty homogenous space of extension, which had no up or down, center or periphery by which it could be oriented. There is thus a tension between the sort of time that Meillassoux uses to develop the challenge of ‘ancestrality,’ a directed time, through which he attempts to reconcile thought and the ‘absolute’, and the sort of time that this ‘absolute’ is revealed to be. This tension is tied up directly with the problematic nature of the spatiality and spatial metaphors that he uses to describe time.

From these brief discussions of Kant via Meillassoux and Meillassoux’s own position, a number of parallels between the two thinkers can be discerned. Firstly, despite the Badiou’s insistence that Meillassoux avoids Kant’s ‘canonical distinction’ Meillassoux nonetheless endorses the rejection of dogmatism and uses Hume’s skeptical insights as a starting point for the development of his own speculative system. Furthermore, this speculative system involves using reason to redefine reason as ‘unreason’ or ‘factiality,’ which is similar to Kant’s Critical use of reason to limit reason, which is a key element of the system of transcendental idealism and thus the Critical philosophy. Finally, both of the positive systems argued for by Kant and Meillassoux—transcendental idealism and ‘speculative materialism’—involve an emphasis on time in the forms of time-determination and ‘hyper-chaos’ respectively.

As briefly elucidated above, Meillassoux’s temporal philosophy contains a tension in the way in which time is expressed in the spatial metaphor; and, following on from the

parallels between Meillassoux and Kant, this prompts the question of what is the role of space in relation to what has so far been set out as Kant's temporal philosophy? This question returns to the first major element of this thesis, the argument for the importance and centrality of space within Kant; but now, the example and details of Meillassoux's interpretation and criticism of Kant, as well as the tension between time and space in his own positive philosophical system provide a set of structures through which the roles of time and space can be elaborated within Kant's own system of transcendental idealism. Firstly, the primacy of the role of temporality in terms of time-determination in the interpretation of Kant elaborated via Meillassoux's criticisms, shows both the way in which Kant is interpreted principally as a temporal thinker and also why time is undoubtedly an important element within his thought. However, this primacy also hides or obscures the importance and details of the role of space within Kant's system. Secondly, the complicated interplay between time and space (the way an emphasis on the former obscures the importance of the latter) is underscored by the tension between the two in Meillassoux's system, and a similar tension is also present in Kant. Space is important for Kant, not in spite of his theory of time-determination or in some way opposed to time, but rather because space and spatiality, as something persisting against which determination is possible, is integral to time-determination itself. Thus, just as space produces a tension in Meillassoux's system it also disrupts the straightforward interpretation of Kant as a purely, or primarily temporal thinker, and indeed complicates or disrupts the account of time given in the *Critique of Pure Reason*. At the very least, space and time must be articulated together in a co-implication, making space as important and central as time in Kant's philosophy. Third and finally, the discussion of space and time in Kant and the recognition of the importance of space can then be used to examine some of the criticisms of Kant raised by Meillassoux concerning the issues of realism and idealism without having to endorse either the position of Kant or the criticisms of Meillassoux. In turn, this explication of Kant and Meillassoux opens up the discussion of the relation between space and time with regard to the wider philosophical project that emphasizes the importance of space within the history and practice of philosophy, especially in terms of philosophies that emphasize time over space (such as Meillassoux's).

§1.5. The Importance of Time and Space for Kant (by way of Strawson's analysis)

These preliminary structures, however, do not fully examine or explicate the details of the roles and relation of time and space in Kant. Some of these particulars have been drawn out via Meillassoux's analysis of Kant, but while that analysis is a useful starting point, Meillassoux's polemical and critical attitude towards Kant means that often the fine details of Kant's arguments are lost or dismissed before they are fully examined. As a counter to this it is useful to consider the example that Peter Strawson provides in his examination of Kant's philosophy in *The Bounds of Sense*. What is instructive about Strawson's method is that while he clearly disagrees with Kant's system of transcendental idealism, this does not lead him to reject Kant entirely or to avoid engaging with the details of Kant's philosophy; instead, it is precisely because he disagrees with Kant that he must closely and carefully engage with and examine the details of his thought; and, in turn, those details are very useful for examining the roles and relations of time and space within Kant's thought, and ultimately, the importance of the latter.⁶

Strawson is also well outside the domain of continental philosophy and thus somewhat immune to Meillassoux's over-arching criticism of the Kantian tradition of continental philosophy (notwithstanding the supposed 'correlationist' tendencies in analytic philosophy). Furthermore, a number of Strawson's criticisms of Kant are similar to those raised by Meillassoux concerning 'correlationism.' Primarily, these criticisms consist of showing how Kant is closer to subjective idealism than he would like to admit. In a similar hyperbolic idiom to Meillassoux's description of the Kantian 'catastrophe,' Strawson labels Kant's system of transcendental idealism a "disastrous model" (21), which "finally denies to the natural world any existence independent of our 'representations' or perceptions, an aspect [that suggests] Kant is closer to Berkeley than he acknowledges" (35). Despite this reservation about the details of Kant's transcendental idealism, Strawson nonetheless considers Kant an important

⁶ Henry Allison terms this tendency in Kant analysis to distinguish between Kant's analytic achievements and his transcendental idealism the "separability thesis" and identifies Strawson as a prime example (2004, xiii). Allison's analysis of Kant is opposed to such a thesis and aims to endorse and defend Kant's transcendental idealism (hence the title of his book).

figure in the history of philosophy, who had insights that cannot be ignored or dispensed with just because of some of the shortcomings of the outcomes of his system. Finally, once it is examined in more detail, the precise nature of Strawson's elaboration of the importance of Kant and the central tenets of his system actually enhances the argument that space is an indispensable, even if also problematic, element within Kant's thought. This is especially obvious in the general claim that Strawson makes about Kant's place in the history of philosophy.

At the start of his book Strawson writes that, "There are limits to what we can conceive of, or make intelligible to ourselves, as a possible general structure of experience." This understanding of the limited nature of human cognition is the fundamental and key insight that Strawson attributes to Kant. As he continues, "No philosopher has made a more strenuous attempt [to investigate these limits] than Kant" (15). The idea of a limit and the related idea of a boundary, as mentioned in the title of Strawson's book—*The Bounds of Sense*—already begins to hint at the notion that Kant's entire project can itself be considered in the spatial metaphor. That it is a sort of 'mapping out' of the limits and/or boundaries of a whole series of different concepts: experience, thought, cognition, reason, sensibility, understanding, and even truth, among others. It is no surprise, then, to find that the spatial geo-metaphors of cartography, navigation and orientation feature strongly in Kant's articulation of his philosophy. This use of the spatial *metaphor* merely hints at the overall importance of space in the philosophical system that Kant constructs, but at the same time, the metaphorical nature of these expressions of spatiality can also hide some of the more explicit ways in which space, in terms of physical or geometrical space, is important to Kant. Strawson himself does not follow through with this insight or examine any of these metaphorical manifestations of space in Kant, he does, however, address the problematic role that space as an explicit feature of the philosophical system, holds within Kant's thought.⁷

Strawson identifies "Four great dualities [that] dominate Kant's theory of the nature of human experience," these are "[1] the duality of appearances and of things as they are

⁷ The importance of the distinction between boundaries [*Grenzen*] and limits [*Schranken*] within Kant's philosophy as well as his uses of spatial metaphors to describe his thought is elaborated in Chapter 4 below.

themselves; [2] of intuitions and concepts; [3] of the *a priori* and the empirical; [and, 4] of the inner and the outer.” Crucially, he also identifies that “All four of them appear in the first major section of the [*Critique of Pure Reason*] the Transcendental Aesthetic” (47). What makes Strawson’s assertion noteworthy is not just the details of the four dualities identified, but rather that he finds them all in the Aesthetic, and thus suggests that this often-overlooked section (it is sometimes—see for example Buroker, 70—considered to be largely the same as the corresponding sections of Kant’s earlier pre-Critical *Inaugural Dissertation*) in fact also holds the most important elements of the whole system of transcendental idealism. The Transcendental Aesthetic is where Kant presents his analysis of the faculty of sensibility and identifies what is *a priori* in sensibility. What he finds are two forms of sensibility that match up with the last of Strawson’s dualities, these are time as the form of inner sense and space as the form of outer sense. Thus from very early on in the *Critique* time and space are bound together as two forms of sensibility; and yet they are, so far, also distinct. Put this simply, what can be taken from this observation is that time and space are both important and that there is some relation between them. The stronger claim, which is argued for in this thesis, is to say that the exact nature of this relationship as the co-implication between space and time is key to the problems of the *Critique* as a whole.

The coupling together of time and space in the Transcendental Aesthetic is the first insight that suggests that space must be essential for any reading of Kant. Without yet fully elaborating on the details of Kant’s own treatment of space and time or his coupling together (these are examined in more detail in Chapter 5 below), it is enough to point out three main features of the discussion in the Aesthetic, which are both illuminating and problematic. Firstly, Kant, in apparent contrast to the effort made to consider time and space together, asserts their *heterogeneity*; he writes that “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). However, and this is the second feature, Kant immediately, in the following sentence, retreats from this strict heterogeneity and asserts that there is some sort of *analogy* between space and time, he continues, “And just because this inner intuition yields no shape we also attempt to remedy this lack through analogies, and represent the temporal sequence through a line progressing to

infinity” (A33/B50). A precursor of the line that Meillassoux will use to introduce the anteriority of what he calls the ‘ancestral’ can already be seen here. The necessity of a spatial analogy might be taken to express, once again in contradiction to what the temporal interpretation of Kant argues, that Kant prioritizes space over time. The third feature of this relation to be drawn from the Aesthetic, the *priority* of time, unequivocally overthrows such a suggestion: Kant writes that,

Time is the *a priori* formal condition of all appearances in general. 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 determination 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 (A34/B50).

Already there can be seen a tension amongst these three assertions concerning the full relationship between time and space. This is a tension that flows through the whole of the *Critique* and thus guarantees at least a disruption whenever time and space are considered. Without attempting, just yet, to resolve this disruption or balance this tension, the presence of the preliminary structures of the approach to the relations of time and space, outlined above, can already be discerned. Running in reverse order to which they were introduced there: firstly, the connection that Kant makes between space and specifically outer sense, places Kant’s discussion of space in the same terms as which Meillassoux addresses realism and the issue of the external world as the ‘great outdoors.’ It is also these direct discussions of space that show the significance of Kant within the project that is explicitly concerned with addressing the importance of the role of space in philosophy and its history. Secondly, the tension or disruptive role of space in Kant is evident in the conflict between the heterogeneity of time and space, the asserted priority of time over space and the analogy between them. Finally, the emphasis given to the priority of time, even if this will eventually be overthrown through the disruptions of space, explains why Kant is considered a thinker of time, and why time has been the major feature of many interpretations and responses to Kant, Meillassoux’s included. The priority that Kant attributes to time in this section of the Aesthetic is undoubtedly central to his entire system, and even if ultimately it must be related to space the importance of time is not diminished.

Strawson is once again useful here, for he does not back away from the significant insights that Kant has concerning time. He writes that, “Kant’s genius nowhere shows itself more clearly than in his identification of ... the possibility of distinguishing between a temporal order of subjective perceptions and an order and arrangement which objects of those perceptions independently possess – a unified and enduring framework of relations between constituents of an objective world” (29). In one sense, this is the heart of the *Critique* and Kant’s system depends on showing the possibility that despite this difference between perception and reality, human cognition is actually capable of determining time in such a way that the objective world can be experienced and known (of course objectivity itself is reconfigured by Kant in his transcendental philosophy). While the issue of time-determination is in many ways the central issue of the *Critique* and thus a focus on time justified, it is not the entire story and this is where space becomes necessary, and also disruptive. As the Transcendental Aesthetic proves, Kant does not entirely ignore space and spatiality. Indeed, within the *Critique* there is plenty of discussion of space, not only in the Aesthetic, but also, significantly, in the Refutation of Idealism that Kant added to the B-Edition. Thus, discussions of space form a crucial element of the *Critique* as a whole. However, in his pursuit of the specifically temporal elements of time-determination Kant does not always make explicit the role that space plays in the possibility of the experience or cognition of the objective world.⁸ Nonetheless, the emphasis on time and the neglect of space by Kant is enough that Strawson can present his re-interpretation and emphasis on the importance of space in Kant as a ‘correction’ of an “element of unexplicitness” (51).

Strawson’s argument builds upon the point that has already been identified, namely the distinction between the subjective order of our experiences and the order of the independent things that are the objects of those experiences, and the fact that there can be a connection or relation between the two through the transcendental possibility of time-determination. For this distinction to be possible, that is, for subjects to be able to think this distinction from wholly within the subjective ordering, it is necessary that the objects of experience, to quote Strawson, “must be conceived as existing within an abiding framework within which they can enjoy their own relations of co-existence

⁸ It is perhaps Kant’s own neglect of explicit issues of spatiality that accounts for the indirect emergence of these issues through his use of metaphors. This possibility will be explored in Chapter 4 below, where Kant’s spatial metaphors will receive further analysis.

and succession and within which we can encounter them at different times, these encounters yielding the merely subjective order of our experiences of them” (27). The merely subjective ordering of perceptions is not enough to know or guarantee this difference, there must be another sort of ordering, and, as Strawson observes, “The abiding framework, of course, is spatial, is physical space” (27). This, as Paul Guyer argues in *Kant and the Claims of Knowledge*, is the argument that Kant presents in the Refutation of Idealism, however, its introduction here comes rather late in the structure of the argument in the *Critique* and only in the later B-Edition at that. This obfuscation of the full role of space in the structure of Kant’s argument is one reason that it has not been given the stronger emphasis that it deserves. Rather, the earlier arguments concerning time-determination—those found in the Transcendental Deduction, the Schematism and Analogies of Experience—have been emphasized. The earlier distinction from the Aesthetic of time and space as the forms of inner and outer sense now reveals its true importance, for if time is the inner sense through which subjective experiences are structured, then space is the outer sense that not only allows for a distinction between the two modes of ordering, but can also provide the context against which the subjective perceptions can be determined (through the categories of relation) and thus themselves become objective experience. It is this role played by space as the ‘abiding framework’ that makes possible all time-determination, and thus for Kant all justified cognition, that is at the core of the argument for the importance of space within Kant, via its co-implication in the issue of time-determination, that is put forward in this thesis. However, because Kant’s own discussion of the importance of space is obscured by his prioritization of time as inner sense and the details of time-determination, the full extent of the importance of space is obscured and has thus been neglected within interpretations that focus on the role of time, such as Meillassoux’s and the more detailed interpretation developed from Meillassoux through the issues of the principle of sufficient reason and Hume’s problem.

§1.6. Space in Kant and the Issues of Realism and Idealism

The two elements of the thesis, the importance of space for Kant and the way in which space is a problematic component in Meillassoux’s criticisms of Kant, now come

together. Meillassoux puts forward an interpretation of Kant that emphasizes time and although he rejects and ‘abandons’ Kant and the transcendental philosophy, the philosophical system that he asserts in place of Kant, his ‘speculative materialism,’ is also one that is explicitly temporal. However, even within this temporal system Meillassoux retains or puts forward certain spatial metaphors and attributes—externality, eternity or simultaneity, direction, and suchlike—and these spatial elements produce a tension with the explicitly temporal attributes of the system. Space, however, is not only problematic for Meillassoux’s own system, nor only for his interpretation of Kant, but is so within all interpretations of Kant that emphasize time over space. This is because space is a problematic and sometimes ambiguous element within Kant’s philosophy itself. Such problems do not, however, mean that space is unimportant for Kant; rather they merely obscure just how important space is within Kant’s transcendental idealism as that which makes possible the time-determination necessary for objective cognition. This connects back to Meillassoux’s criticism of Kant as a ‘correlationist,’ as that critique is concerned with the existence and reality of objects in the external world and the importance of space for Kant is precisely due to the fact that it is the outer sense of external objects.

Strawson, once again succinctly sets out the details of this debate and how it can be explicated through the spatial interpretation of Kant. From the disruptive thesis that space is the ‘abiding framework’ through which objects relate to each other (an assertion that Strawson notes Kant “scarcely distinguished” (25)) Strawson draws out his own claim of “the truth that objects of our experience conceived of as existing independently of experience of them are in fact spatial” (25).⁹ This ties together the ideas of the independent existence of things—a form of realism—and space, or at least the thinking of spatiality (and, by contrast, any preference for the inner and the temporal is now associated with a tendency towards idealism). It is because of this that one of the conclusions of this thesis is that it is through the discussion of space that Kant ultimately engages with the issue of the reality of the external world in such a way that the charge of ‘correlationism’ put forward by Meillassoux can be problematized. Once more, a certain amount of unexpected similarity between Kant

⁹ Strawson makes a similar connection between spatiality and objectivity in his own philosophy and explicitly traces the origin of this idea back to Kant. See *Individuals: An Essay in Descriptive Metaphysics*, page 62.

and Meillassoux develops as this connection of space and reality recalls Meillassoux's evocation of Cartesian extension and the independence of substance. Furthermore, the distinction between time and space, drawn along the lines of the inner and the outer, where time orders subjective perceptions and space orders external objects, also clashes with Meillassoux's claim to think of external, independent and absolute reality as temporal 'hyper chaos.' Of course, that the finer details of Kant's system, or Strawson's explication of it, is not compatible with Meillassoux is itself not a contradiction as Meillassoux aims to 'abandon' Kant altogether and thus rewrite the possibilities, restrictions and definitions of time and space. What the explication of the importance of space within Kant does do, however, is reconfigure the terms of the dispute between Kant and Meillassoux and show how interpretations of Kant that emphasize time also emphasize the idealist elements within Kant, but a recognition of Kant's engagement with space and the 'abiding framework' of the external world counters not only Meillassoux's criticism of Kant but also provides the conceptual framework for a criticism Meillassoux's own system.

§1.7. Kant, Space and Time, and the Wider Context of Philosophy

Just as the analysis of the interrelation of time and space in Kant disrupts Meillassoux's criticism of Kant and the system he builds in the place of Kant, it also affects the place and interpretation of Kant and the roles of time and space in the wider contexts of the history of philosophy and contemporary philosophical developments. This wider context is important because Kant occupies a central and foundational role within the history of modern philosophy. As Howard Caygill asserts on the first page of his *Kant Dictionary* (1995), "The influence of Kant's philosophy has been, and continues to be, so profound and so widespread as to have become imperceptible" and consequently that, "Kantian philosophy has established itself as an indispensable point of intellectual orientation" (1). It is, of course, precisely this influence of Kant that Meillassoux attempts to negate in his criticism of Kant under the heading of 'correlationism,' which, as an all-encompassing term for all philosophy that follows from Kant, reinforces the centrality of Kant within the history of philosophy. Even as an attempt to displace that pervasive influence, Meillassoux nonetheless, in a negative

way, asserts the importance of Kant. Within both of these statements of the influence of Kant is the significant recognition that that influence is not always clear, straightforward or even affirmed by those philosophers and systems that follow it. It is in the obscurity or the imperceptibility of Kant's influence that the conceptual framework outlined along the relation of time and space is useful for identifying and reconciling the Kantian elements and inheritances within philosophy.

If it is possible to construe all philosophy as influenced by Kant, as a Kantian inheritance, then this inheritance is widely understood to be a philosophy of time. Edward Casey identifies an "era of temporocentrism (i.e., a belief in the hegemony of time) that has dominated the last two hundred years of philosophy" (1998, x), which corresponds closely to the period since Kant's intervention. Identifying a similar timeframe and characterization, Peter Osborne writes, "modernity is a culture of time of which nineteenth- and twentieth-century European philosophy has been a crucial constituent part" (1995, x).¹⁰ Later in his book, as he turns from a consideration of the 'cultural' aspects of this temporal modernity to a 'phenomenological ontology' of time, Osborne traces this focus of philosophy through Paul Ricoeur's three-volume *Time and Narrative* with reference to Husserl's *Lectures on the Phenomenology of*

¹⁰ Osborne's emphasis on *European* philosophy suggests that the philosophical focus on temporality could be seen as largely an issue in continental philosophy. Recent work that emphasizes the history of continental philosophy as temporal philosophy can be found in Leonard Lawlor's *Early Twentieth-Century Continental Philosophy* (2012, see page 1 for Lawlor's "four formulas" of continental thought and page 207 for his emphasis on the temporal 'out of jointness' that runs through all of this philosophy) and John McCumber's *Time and Philosophy: A History of Continental Thought* (2011, see page 7 for his assertion that, "that continental philosophers accept two principles deeply foreign to traditional philosophy: (a) that everything philosophy can talk about at all is in time, and (b) that philosophers must be faithful to this at all times"). The recentness of these works does not indicate that this connection is a new one. Earlier examinations of the same conjunction of continental philosophy and the issue of time can be found in the work of David Wood (2001 & 2007). For a treatment that looks at the 'time-sicknesses' across the analytic / continental divide (and addresses the nature of such a divide in the process) see Jack Reynolds's *Chronopathologies: The Politics of Time in Deleuze, Derrida, Analytic Philosophy and Phenomenology* (2011) as well as chapter 17 of *Analytic Versus Continental* (2010, with James Chase), the review of this book by Paul Redding (2011) and Reynolds's response to that review in his summary of *Chronopathologies* in *Parrhesia* no. 15 (2012). To briefly summarize, even if 'continental' philosophy is defined by a 'temporal turn' into 'lived time,' and 'analytic' philosophy by a similar but opposed 'atemporal turn' that attempts to show timeless truths about the cosmos, the latter still constitutes a position on time and towards time. Indeed, the negotiation of these two positions is the fundamental issue in the Kantian legacy of philosophy as one of time.

Internal Time Consciousness and Heidegger's *Being and Time*, but also specifically locates "its modern, transcendental variant in the 'Transcendental Aesthetic' of Kant's *Critique of Pure Reason*" (45). Of course, as is always the case in philosophy there are pre-modern treatments of what comes to be seen as a specifically modern issue. In this case Augustine's treatment of time in Book II of the *Confessions* and Aristotle's examination of time in book IV of the *Physics* (Osborne, 45). These precursors are important, as it is the confrontation between them that, in Ricoeur's terminology, defines the "Aporia of Temporality" (see *Time and Narrative* vol. 3, Section 1), in their contrasting accounts of the 'time of the soul' (Augustine) and the 'time of the world' (Aristotle). Kant ultimately attempts to negotiate this aporia directly with his account of transcendental time-determination as that which determines the objective series of time from mere undetermined subjective experience, this is precisely the 'genius' of Kant that Strawson stressed.

David Hoy, in his 'critical history of temporality' *The Time of our Lives* (2009), makes the stronger claim that "The project of all philosophy may be to gain reconciliation with time, whether or not a particular philosopher includes an explicit analysis of time" (xi). He also sets up this attempt to gain reconciliation in terms of the contrast or aporia between the 'time of our lives' (the phenomenological examination of time, this is the side of the equation that Hoy is interested in investigating) and the 'time of the universe' (the scientific or 'objective' investigation of time); but after setting up this contrast he then asks what he calls "Immanuel Kant's question," which directly addresses this distinction: "is temporality a feature of us or of the world? That is, is the time of our lives subjective or objective, or is there a third possibility?" (xii-xiii). Kant, of course, with his 'transcendental' philosophy, creates his own 'third possibility' to answer this question and sidesteps the hard distinction between subjective and objective, but this does not mean that he renounces completely the sort of 'reality' that is here referred to as 'objective.' Indeed, the negotiation of that problem, the issue of the reality of the cosmos, through the issue of time (and space) is precisely Kant's aim. This 'third possibility' of not only time as transcendental time-determination, but also as the renegotiation of the subject object divide, is precisely what Meillassoux challenges under the name 'correlationism,' and this brings back together Meillassoux's criticism of Kant and the issues of time. As has been argued briefly

above, however, considering Kant in terms of time alone is problematic, even for the issue of time-determination, and space plays a central role within his system.

Naturally, the importance of space has been addressed before, both in terms of its role in philosophy in general or in Kant in particular, or even its secondary status with regards to time. In his consideration of *The Politics of Time*, Peter Osborne also notes how “Spatial relations have tended to be neglected in discourses on modernity” and that the concept of modernity thus has “repressed spatial premises” (15-16), or is “bound up with the politics of a shifting set of *spatial* relations” (13), and that “‘postmodernity’ marks a revolution in spatial relations” (15). This last claim pre-emptly something akin to the ‘spatial turn’ in contemporary thought, which draws together geographers, artists, architects, sociologists, and other disciplines (Warf & Arias 2009). In a philosophical context this ‘spatial turn’ is evident in the work of philosophers who emphasize the importance of space through the specific spatiality of place, such as Edward Casey (1993, 1998), Jeff Malpas (1999, 2006, 2012) and Dylan Trigg (2012). In these works, the specificity of place is often put forward in contrast to space as the empty homogeneity of pure extension used in science (Casey 1998, 133ff or Malpas 1999, 20), but nonetheless, such a distinction between place and space can only be made from within the recognition of some minimal condition of spatiality, thus and space in a more general sense is still important. Indeed, the more fundamental opposition in these works is often between space (in terms of place) and time, which is set out as the dominant or privileged mode of philosophy, as discussed above (Casey 1993, 6-11). These recent emphases on the importance of spatiality are examples of Foucault’s observation in ‘Of Other Spaces: Utopias and Heterotopias’ that “the present epoch will perhaps be above all the epoch of space” (1984, 1). It is notable that David Harvey traces Foucault’s interest in geography back to his engagements with Kant (2007). In this sense Foucault, despite his usual characterization as a historian or genealogist, would represent an example of an interpreter or inheritor of Kant who recognizes the importance of spatiality in that inheritance.¹¹ Following this line, we can see that if we are to take Foucault’s assertion about the spatiality of the present

¹¹ For more on Foucault as a thinker of space see Elden (2001) and Crampton and Elden (2007).

epoch seriously, we must first go back to Kant to find the origins of that spatiality (both Foucault's and that of the present) in his treatment of space.

Similarly, there are numerous Kant scholars who have examined and emphasized the importance of space within his work. Examples of these are Peter Strawson in *The Bounds of Sense* (1966), which was discussed above; Paul Guyer in *Kant and the Claims of Knowledge* (1987), which examines the importance of space in the *Critique of Pure Reason* and is invaluable for this thesis; and Michael Friedman, who in *Kant and the Exact Sciences* (1992) emphasizes the central role that space plays in Kant's treatments of natural science. Such examinations of the role of space in Kant show that it is an issue that has not been entirely ignored, just as the issue of space in general does receive some discussion in philosophy, and the dominance of time in the post-Kantian history of philosophy is not absolute and to the total exclusion any examination of space. All of these thinkers and their analyses of Kant's engagement with space are addressed in Chapter 5 below, which argues for the co-implication of space and time within Kant and addresses how it is through this co-implication and the centrality of space that it involves, that Kant engages with the issue of the reality of the external world.

The original insight of this thesis is to bring these disparate elements together, and show how the emphasis on time in the post-Kantian path of philosophy, specifically in terms of Meillassoux's charge of 'correlationism' and the 'abandonment' of Kant that he proposes, is tied up with the 'repression' or 'neglect' (to use Osborne's words) of space, and that how retrieving the importance of space and its role in relation to time within Kant and interpretations of him can both address the criticisms of Meillassoux and also contribute to the contemporary project of the philosophy of space. These are the two major elements of the argument of this thesis and the progression of the precise line of argumentation that the thesis follows can now be set out.

The progression of the argument proceeds in terms of the 'canonical distinction' of dogmatism, skepticism and criticism, that Kant discerns and follows in the course of his own thought, and which Meillassoux purportedly 'circumvents' through his 'abandonment' of the transcendental via the critique of 'correlationism' and the construction of the system of 'speculative materialism' in its place. Chapter 2 uses Meillassoux's criticisms and interpretations to trace Kant's rejection of dogmatism and

the principle of sufficient reason in the pre-Critical writings and the Transcendental Dialectic. In doing so, this Chapter also traces the development of some of the key foundations and features of Kant's transcendental idealism, such as the distinction between sensibility, understanding and reason, and the thesis of the transcendental ideality of the forms of cognition. Chapter 3 shows the role that Hume's skepticism and the problem of induction plays in Kant's reformulation of the principle of sufficient reason in the Second Analogy, which reveals the role of time and time-determination in the Critical philosophy, a role somewhat similar to the importance of time in Meillassoux's own philosophical system. At this point Meillassoux's own temporal system is explained and the parallels between his own avowedly anti-transcendental 'speculative materialism' and the transcendental idealism of Kant that he aims to displace are identified. Through these parallels, their orientation to dogmatism and skepticism and Meillassoux's own relation to reason, it is then argued that in many ways Meillassoux's system can also be seen as Critical, in precisely the way that Kant uses this term and positions his philosophy as the critique of reason by reason. The disruptions of space in Meillassoux's temporal philosophy are then discussed, a discussion which, by way of the earlier established parallels with Kant and the insights about Kant's own temporal philosophy, leads back to Kant and the examination of the interrelation of time and space within his system. This examination is carried out in Chapters 4 and 5, which directly address Kant's Critical system, with particular attention to the elaboration and relations of time and space. Chapter 4 specifically uses Kant's spatial metaphors of geography, cartography and navigation in the *Critique* to trace the importance of the role that space (in terms of physical extension or geometrical abstraction) played in the Critical turn and the development of transcendental philosophy. Chapter 5 then deals with the elaborations of time and space in the Transcendental Aesthetic in the *Critique of Pure Reason*, and traces them through the arguments of the Deduction, Schematism and Analogies, to show how in these sections Kant undoubtedly prioritizes time and time-determination—an argument already rehearsed and revealed in the discussion of the Analogies in Chapter 3. Now, however, with the need to address the importance of space within Kant and the hint of the tensions between space and time gleaned from the parallels between Meillassoux and Kant, it is argued that the emphasis on time fails to complete the argument that Kant intended to put forward, and that he attempts to rectify this by turning to space and spatiality in the Refutation of Idealism that he added to the B-Edition of the

Critique. This is an argument that follows work done by Paul Guyer (1987) and Garth Green (2010), who explicitly examine the arguments of the *Critique* in terms of the centrality of time-determination and inner sense, but in doing so they also address how time is intimately and necessarily connected to and problematized by space and outer sense. It is Kant's discussion of time and space in terms of inner and outer sense that brings the argument back to the debate between realism and idealism, and how Meillassoux frames his criticism of Kant in terms of this debate through the charge of 'correlationism.' Meillassoux's charge of 'correlationism' and his critique of Kant in general, can now be readdressed through the relation between the roles of time and space. Such a reassessment underscores the necessity of engaging with Kant through the centrality of space, its co-implication with time, and the engagement with the real that this centrality reveals; and in turn this highlights the limitations and problems that lie in both Meillassoux's temporal interpretation of Kant and his attempt to 'abandon' the entire legacy of Kant, thus confronting and completing the two elements that constitute the argument of this thesis.

Chapter 2. Meillassoux and the Kantian 'Catastrophe': The Rejection of Dogmatism and the Principle of Sufficient Reason

As noted, the aim of this Chapter is to use the work of Quentin Meillassoux as a way to address the intervention and innovations that Kant made in philosophy, especially with regards to his engagements with and ultimate destruction of dogmatic metaphysics. As addressed in the previous Chapter, this engagement is structured through Badiou's assertion that Meillassoux's path avoids Kant's 'canonical distinction' between dogmatism, skepticism and Critique. For the sake of this Chapter there are two important elements to draw out of Badiou's claim. The first is that Meillassoux somehow avoids, or attempts to avoid this distinction, and thus also the 'catastrophic' philosophical influence of Kant. It is because of this attempted avoidance that Meillassoux is useful interlocutor in addressing Kant. In his antipathy towards Kant he hyperbolically emphasizes the intervention, role and importance of Kant in such a stark way that it is necessary to re-interpret Kant to find out if his position is really as 'catastrophic' as Meillassoux describes. He thus provides a very useful gauge of not only the influence that Kant had on the history of philosophy, but also some of the details of that intervention. These details emerge in the second important point to take from Badiou's claim, the 'canonical distinction' of dogmatism, skepticism and Critique, in particular the first of these, dogmatism.

It has already been addressed how Kant himself viewed the three stages of the 'canonical distinction' as essential to the path of philosophy, but what is argued here is that Kant also passed through each of these stages in the development of his Critical philosophy, starting with dogmatism. Focusing on the role and place of dogmatism in Kant's thought is pertinent because with this role in mind a tension begins to appear with the claim that Meillassoux bypasses the 'canonical distinction' that includes dogmatism. This is because Meillassoux, despite his antipathy towards Kant, does indeed make use of the relationship between Kant and dogmatism (and eventually, skepticism and Critique) in his discussion of not only Kant, but also the problems that he diagnoses in Kant and uses to develop his own opposed philosophical position. The 'canonical distinction' that he supposedly avoids is thus particularly useful in discussing not only Meillassoux's analysis and criticism of Kant, but also his own

philosophical position. This Chapter focuses on the first part of this claim, the role of dogmatism in Meillassoux’s treatment of Kant, and by extension as a way to examine and explore Kant’s philosophy itself. The following Chapter extends the ‘passage’ of philosophy and examines the role of skepticism, and especially Hume, in Kant’s thought, a moment that is also used to examine the alternative system that Meillassoux attempts to erect in the place of Kant and the ‘canonical distinction.’ In doing so, this movement from Meillassoux’s treatment of Kant to Kant’s work itself also exposes and addresses the limitations and problems of Meillassoux’s interpretation and criticism. The final Chapters (4 and 5), directly address Kant’s Critical philosophy and examine the role of space within his system.

This Chapter commences (in §2.1) with an examination of Meillassoux’s hyperbolic condemnation of Kant as a ‘catastrophe’ and the details of the charge of ‘correlationism’ that he lays against Kant (§2.1.1). This opens up a preliminary discussion of the nature of the details of Kant’s philosophical position (§2.1.2). What is especially useful about Meillassoux’s treatment of Kant, however, is the analysis that he provides of the context and nature of the Kant’s philosophy in terms of the influence of the contemporary sciences on Kant, as well as the role of Hume. Meillassoux terms this a ‘genealogy’ of the ‘Kant event,’ and this is addressed in §2.1.3. While this genealogy emphasizes science and skepticism, the true insight that Kant takes from these developments is, in Meillassoux’s analysis, proof of the illegitimacy and thus the destruction of dogmatic rationalist metaphysics. In this sense Meillassoux follows the ‘canonical distinction’ and Kant’s progression through it rather closely. Furthermore, as examined in §2.2, Meillassoux explicitly endorses this rejection of dogmatism and avowedly takes it as a Kantian ‘inheritance.’ Meillassoux’s somewhat surprising endorsement of this element of Kant’s thought is then (in §2.3) used as a way into examining Kant’s long engagement with dogmatism and the various processes that he passed through before his eventual Critical destruction of dogmatic metaphysics in the Transcendental Dialectic of the *Critique of Pure Reason*. It is then argued that while Meillassoux is correct in identifying the rejections of the principle of sufficient reason and the ontological argument as important elements of Kant’s destruction of dogmatism, especially in the pre-Critical writings (§2.3.1), the full nature of this rejection is not quite so straightforward, and that the discovery of the Antinomies in fact played a more significant role than either the principle of sufficient

reason or the ontological argument (§2.3.2). The full Critical account of the problems of dogmatic metaphysics in the Transcendental Dialectic is actually a subtle and complex series of arguments, that build on these earlier developments and requires a close examination and interpretation (§2.3.3). This detailed engagement with the Dialectic underscores the shortcomings of Meillassoux’s characterization of the ‘Kant event’ and shows how Kant’s analysis leads reason [*Grund*] to its own dark abyss [*Abgrund*], a position from which Kant can begin to reconstruct philosophy.

§2.1. Kant as ‘Catastrophe’: The Charge of ‘Correlationism’

Although Meillassoux’s ultimate argument may, as Badiou claims in the Preface, aim to bypass the distinction between dogmatism, skepticism and criticism, these categories or modes of philosophy, play a central role in setting up the argument in *After Finitude*. Early on in the book Meillassoux presents his own twofold thesis:

on the one hand, we acknowledge that the sensible only exists as a subject’s relation to the world; but on the other hand, we maintain that the mathematizable properties of the object are exempt from the constraint of such a relation, and that they are effectively in the object in the way in which I conceive them, whether I am in relation with this object or not (3).

This is, he immediately notes, a thesis that may seem absurd to what he refers to as a “contemporary philosopher,” because it “is resolutely *pre-critical* – it seems to represent a regression to the ‘naïve’ stance of dogmatic metaphysics” (3). Here he makes use of the explicitly Kantian terms and periodization of the progression from dogmatism to Criticism, and in doing so he recognizes that the distinction between dogmatism and Criticism plays some role in philosophy, both historically and conceptually. The characterization of Meillassoux’s own thesis as ‘absurd’ and ‘pre-critical’ or ‘dogmatic’ by the ‘contemporary philosopher’ is concerned with the suggestion that it is possible to distinguish between the properties of the world that are produced by the relation of the knower to the world, and those that are knowable properties of the world ‘in itself’, the ‘real world’ as it exists independently and indifferently to any relation to a knower. It is such knowledge of the world ‘in itself’ and unrelated to the relation of knowing subject that is supposedly decried by

‘contemporary philosophy’ as naïve and dogmatic; and it is the intervention of Kant and the invention of his Critical philosophy that disproves and shows the naivety of such dogmatism. Thus, while Meillassoux’s ultimate argument aims to show that his thesis is not in fact dogmatic and is not precluded by the post-Critical condition of ‘contemporary philosophy,’ he does nonetheless recognize precisely what is at stake in this distinction and set out his arguments from the very start in terms of this distinction. In is in the context of this possibility of proving and accessing the ‘real world’ in itself, that is, arguing for some non-dogmatic form of realism, that Meillassoux frames his engagement with, and criticism of, Kant.

§2.1.1. ‘Correlationism’

In this way, Meillassoux begins to sketch out what he sees as the negative influence of Kant on contemporary philosophy (although he does recognize the importance of Berkeley in contributing to this break (2008a, 3)). He sets out the result of Kant’s Critical intervention as demonstrating that “thought cannot get *outside itself* in order to compare the world as it is ‘in itself’ to the world as it is ‘for us’, and thereby distinguish what is a function of our relation to the world from what belongs to the world alone” (3-4). This is, he maintains, the insight of “any philosopher who acknowledges the legitimacy of the transcendental revolution – who sees himself as ‘post-critical’ rather than as a dogmatist” (4). In contrast, Meillassoux will himself aim to put forward a philosophy that asserts and demonstrates how thought can ‘get outside itself’ and know the world as it is in itself, without falling prey to the naivety of dogmatism, the anarchic despair of skepticism, or the limitations of Critical philosophy. Since this Chapter uses Meillassoux’s interpretation of Kant to open up another detailed interpretation of Kant, it sets aside the specifics of Meillassoux’s own positive arguments for the time being (and returns to them in the next Chapter) and concentrates on his characterization of the Critical ‘transcendental revolution’ and the details of Kant’s legacy through which he puts forward ‘contemporary philosophy’ as ‘post-critical.’

What is significant in the progression of Meillassoux’s argument, is that in his own criticism of contemporary philosophy he does not turn directly to Kant’s

transcendental revolution and an examination of its Critical legacy, but rather to what he calls ‘correlation,’ which he sees as “the central notion of philosophy since Kant” (5); and from this develops his polemical characterization of contemporary post-critical philosophy as ‘correlationism,’ which he later describes as the “exacerbated consequence” of what is now hyperbolically and polemically called the “Kantian catastrophe” (124). There is an evasiveness in Meillassoux’s examination of ‘correlationism’ as he moves between its origin in Kant and its consequences in contemporary philosophy (most prominently in Heidegger).¹ By criticizing both of these positions under the heading of ‘correlationism’ all of these systems are compiled into one, where the flaws can be emphasized and their defenses minimalized. Kant is critiqued from the perspectives of the supposed ‘consequences’ of his Critical turn and those consequences are attacked because of their origin in Kant, and somewhere in between a certain amount of the details of Kant’s philosophy is lost (or ignored). Although this compilation and evasiveness appears as a weakness in Meillassoux argument, it is actually something that he explicitly uses in an attempt to deflect the necessity of any close examination of either Kant or Heidegger (or anyone in between or beyond them). Acknowledging and affirming this, he writes:

As you know, I have given the name of ‘correlationism’ to the contemporary opponent of any realism. By this term I wanted to avoid the usual ‘parade’ of transcendental philosophy and phenomenology against the accusation of idealism – I mean answers such as ‘Kantian criticism is not a subjective idealism since there is a refutation of idealism in the *Critique of Pure Reason*’, or ‘phenomenology is not a dogmatic idealism, since intentionality is oriented to radical exteriority ...’ (Meillassoux 2007, 408).

This negative definition of ‘correlationism’ must be read against the ‘realism’ that Meillassoux argued for at the start of *After Finitude*, and the opposition between Meillassoux’s ‘realism’ and the ‘correlationism’ he attributes to Kant begins to

¹ While Kant is the origin of ‘correlationism,’ Meillassoux suggests that its apex is found in the thought of Martin Heidegger. This suggestion can be found on page 8 of *After Finitude*, where Meillassoux confines himself to “one example” of ‘correlationism,’ which is Heidegger. Similarly, on pages 41-2, when he claims that ‘correlationism’ is the dominating feature of both continental and analytic philosophy the example he gives of the former is once again Heidegger (and Wittgenstein for the latter, although this is not pursued either by Meillassoux or people who have followed or elaborated on his original critique of ‘correlationism’). Heidegger and phenomenology and continental philosophy or the ‘linguistic turn’ remain the main targets of such criticisms—see Bryant *et al* (2011, 1).

develop.² Before turning to the positive definition of ‘correlationism’ it is important to note how this negative definition reveals both the strategic nature of its use by Meillassoux, and also an unintended opportunity for my own interpretation of Kant through Meillassoux. The term ‘correlationism’ and its evasions and compilations allows Meillassoux to sidestep specific issues and arguments in his targets. But this explicit evasion leaves several gaps in Meillassoux’s characterization of Kant in particular. As the above section explicitly states, Meillassoux does not directly address the Refutation of Idealism that Kant adds to the B-Edition of the *Critique*. He avoids this because he does not want to engage with Kant’s own characterization of idealism and the refutation he performs in the name of his own ‘correlationist’ (in Meillassoux’s analysis) transcendental idealism. What is argued in the present thesis, through a close interpretation of Kant using the gaps that Meillassoux leaves in his own interpretation, is that the Refutation is important not because of its explicit engagement with idealism, but for how it operates in the context of the issues of time and space in the *Critique*. Thus, by explicitly ignoring it, Meillassoux also ignores these issues of time and space, which through their neglect become problematic as they play out in his philosophy. This is another way that Meillassoux’s interpretation of Kant is very useful in directing the more detailed interpretation of Kant, in this case through what Meillassoux explicitly *does not* read. The specific details of the Refutation of Idealism are examined below in Chapter 5 with an explicit focus on the importance and centrality of space for Kant, but before that the analysis will return to the ‘catastrophe,’ and thus importance, of the Kantian turn and Meillassoux’s analysis of it in terms of his concept of ‘correlationism.’

The correlation that Meillassoux identifies as the central notion of contemporary philosophy is the connection between thinking and being, which must always be considered together and define the possibility of any access to or knowledge of the world. This becomes ‘correlationism’ when this correlation is elevated to an

² Just as there is an evasiveness in Meillassoux’s use of the term ‘correlationism’ there is also a vagueness about his use of the term ‘realism’ here. As its juxtaposition with idealism suggests, this is a general and fairly straightforward question of the reality of the external material world, not part of the debate about the reality of mathematical objects or other such specific questions of ‘realism.’ More on the issue of realism and anti-realism in contemporary continental philosophy, in a similar vein to Meillassoux’s criticisms, can be found in Lee Braver’s *A Thing of this World: A History of Continental Anti-Realism* (2007).

unsurpassable position meaning that thought can never get beyond its own relation to being in order to consider being itself (or, indeed, the latter becomes an impossible conception as both being and thinking are defined only in the co- of their relation). This can also be set out in terms of the subject and object (a more common articulation of contemporary philosophy), whereby “we can never grasp an object ‘in itself’, in isolation from its relation to a subject [and] we can never grasp a subject that would not always-already be related to an object” (2008a, 5). The reciprocity of these two directions of relation closes in on what Meillassoux terms the ‘correlationist circle’ or ‘two-step.’ Ultimately, this comes down to the assertion of the irreducible primacy of the relation and the ‘co-’ that becomes the “chemical formula” that “dominates modern philosophy” (5). Consequently the totality of this correlation means that the sort of naïve realism of dogmatic metaphysics—the assertion of the world alone and without any relation to any thought or knowledge of it—becomes impossible.

Just as ‘correlationism,’ in some guise, constructs itself as opposed to naïve realism, it also presents an argument against simple subjective idealism—the ‘internal’, ‘subjectivist’ adversary, in Meillassoux’s terms (38). The concept that ‘correlationism’ puts forward to counter this threat of idealism is that of facticity. On one level it is easy to see how a straightforward assertion of the facticity of the world for a subject, such as Heidegger’s dual articulation of being-in-the-world and Dasein, is an example of ‘correlationism,’ but Meillassoux’s examination of facticity operates at a slightly different level, one that aims at the heart of the Critical transcendental system. In examining the “facticity of the correlation” Meillassoux compares Kant’s assertion that it is only possible to describe the *a priori* forms of knowledge, with Hegel’s speculative insistence that they can be genetically derived; and this distinction opens up what is for Meillassoux an important detail of Kant’s philosophy, the unknowability, yet existence, of the thing in itself. This trace of the thing in itself in Kant’s philosophy in turn explains why Meillassoux will, in an acceptance of some subtleties in the otherwise all-encompassing charge of ‘correlationism,’ distinguish Kant as a ‘weak correlationist’ in distinction from more recent, i.e. phenomenological, forms of ‘strong correlationism’ (35). Before exploring this distinction it is first necessary to examine in a little more detail the arguments concerning Kant and the issue of facticity that Meillassoux puts forward as the ‘correlationist’s’ defense against straight out subjective idealism.

Instead of considering the facticity of the world and subject, perhaps a more standard defense of the sort of ‘exteriority’ of the correlation, Meillassoux examines what can be referred to (although Kant never does) as the facticity of the forms of thought put forward by Kant. As Meillassoux puts it, “Kant maintains that it is impossible to derive the forms of thought from a principle or system capable of endowing them with absolute necessity” (38). There are several details here that, as the argument is presented here, pre-empt what will shortly be drawn out as important within Meillassoux’s characterization of Kant; namely, the issue of absolute necessity, the absolute or absoluteness itself, and their relation (or possible relations) specifically to a *principle*. What is important for Kant, in Meillassoux’s interpretation, is that the forms of thought—“the *a priori* forms of knowledge (space and time as forms of intuition and the twelve categories of the understanding” as Meillassoux describes them (38)—are simple facts and can only be described as they are found, never related back to any real absolute necessity. If they were capable of being shown to have absolute necessity (as Hegel, for Meillassoux, aims to show) then they would be able to be considered in themselves and it would be possible to establish and know the distinction between thought experience and something in itself.

The facticity of the forms of thought provides another prohibition on knowledge of an ‘in itself,’ but at the same time it entails the world itself as fact and as given, or co-given, with the subject of those very forms of thought. Meillassoux writes: “What I experience with facticity is not an objective reality [‘in itself’], but rather the unsurpassable limits of objectivity confronted with the fact *that there is* a world; a world that is describable and perceptible, and structured by determinate invariants” (40). With the facticity of the forms of thought comes the facticity of the world, but along the way the thing in itself is so radically precluded that it seems untenable. Meillassoux continues, “The in-itself becomes opaque to the point where it is no longer possible to maintain that it exists, so that the term tends to disappear to the benefit of facticity alone” (40). It is the total erasure of the thing in itself behind the facticity of the correlation of the subject and world in invariant forms of thought that is the move from the ‘weak correlationism’ of Kant to the ‘strong correlationism’ of ‘contemporary philosophy.’ As Meillassoux described it, prior to his identification of the role of facticity as the ‘more fundamental’ correlation,

it seems that the wisest course is simply to *abolish* any such notion of the in-itself. Accordingly, it will be maintained that the notion of the in-itself is devoid of truth because it is unthinkable, and that it should be abolished so that only the relation between subject and object remains, or some other correlation deemed to be more fundamental (37).

Ultimately, Meillassoux finds this complete abolition of the thing in itself and the shift from Kantian ‘weak correlationism’ to the contemporary ‘strong correlationism’ in the thought of Fichte (2007, 409-10); and ultimately the apex of this idea in Heidegger’s notion of being-in-the-world. The abolition of the thing in itself and the move from ‘weak’ to ‘strong correlationism’ thus both finds its origin within Kant and also the impetus to extend beyond Kant and present a doctrine that is more radical than that which Kant presents. But this brief account of ‘correlationism,’ with its Kantian origin and extension beyond the limits of Kant through the very power of Kant’s argument, now provides the structure required for a brief examination of Kant and the intervention that he makes in philosophy in order to understand how he himself frames and develops his own philosophy.

§2.1.2. Kant, the Forms of Thought, Transcendental Idealism and the Copernican Revolution

What has been briefly discussed as the ‘forms of thought’ through Meillassoux’s conception of facticity can now be used as a way back into examining Kant’s Critical turn and the philosophy that he developed in the *Critique of Pure Reason*. Such an examination also confronts the ascension of the priority of the correlation that Meillassoux attributes to Kant.

Meillassoux presented the formulation of the ‘forms of thought’ as they appear in the *Critique*, namely, space and time as forms of intuition and the categories of the understanding. However, these alone, in their fully fledged Critical form, do not explain completely why Kant constructs his Critical philosophy in terms of these ‘forms of thought’, nor the details of how this develops into both/either Kant’s transcendental idealism or Meillassoux’s ‘correlationism.’ *A Reflexionen* (R4634) from 1772-73, i.e., the beginning of the so-called silent decade that Kant took to compose the *Critique*, concisely sets out the why he shifts to investigating ‘forms of thought’ and what they are in general. He writes:

If certain concepts do not contain anything other than that by means of which all experiences are possible on our part, then they can be asserted *a priori* prior to experience and yet with complete validity for everything that may come before us. In that case, to be sure, they are not valid of things in general, but yet of everything that can ever be given to us through experience, because they contain conditions by means of which these experiences are possible. Such propositions would therefore contain the condition of possibility not of things but of experience. However, things that cannot be given to us through any experience are nothing for us; hence we can very well treat such propositions as universal from a practical point of view, not only as principles of speculation about objects in general (17: 618).

This note contains in miniature the shift that characterizes Kant’s transcendental philosophy. Firstly the sort of concepts that Kant is interested in are not concepts that either are directly connected to or ‘of’ the world, or that accurately ‘reflect’ it in some way. This prohibition on the ability of concepts to reveal reality in itself is part of Kant’s criticism of the intellectual intuition of dogmatic rationalism (this is explained in detail in §2.2 below). Instead, he turns to the ‘forms of thought’ that make experience possible but are not themselves part of or given by experience. This ultimately reconfigures both the objects of any possible knowledge and also the aim of philosophy, now defined in terms of the examination of such conditions of possibility of objects, which themselves now become redefined in terms of experience. As Kant puts it in the *Critique*: “The *a priori* conditions of possible experience are at the same time [*zugleich*] conditions of the possibility of objects of experience” (A111). With this reconfiguration of the object away from the in itself of ‘reality’ and now in terms of the possibilities of experience, the first seeds or danger signs of a potential charge of ‘correlationism’ can be discerned. However, it also provides a neat example of what Kant calls and examines in terms of *transcendental* questions (a nomination that will be pertinently followed by Meillassoux).³ Once again in the *Critique*, Kant writes: “I

³ In addition to naming this philosophy as ‘correlationism,’ Meillassoux also explicitly refers to it with the name “transcendentalism” (6, 51) and sets up his own project as “the relinquishing of transcendentalism” (27) or as “anti-transcendental” (110). ‘Transcendentalism’ is strange term that through its use provides some insight into the problems of Meillassoux’s polemical argument. In the *Prolegomena* Kant retreats from his earlier language of transcendental idealism as he blames the accusations of subjective idealism leveled against the *Critique* on its usage being misunderstood. He goes so far as to say that he will “gladly withdraw this name [transcendental idealism], and will have it called critical idealism” (4: 293). Similarly in a footnote added to the B-Edition Antinomies he notes that he has “occasionally called it formal idealism ... [as] In many cases it seems more advisable to employ this rather than the expression given above [transcendental idealism], in order to avoid

call all cognition **transcendental** that is occupied not so much with objects but rather with our *a priori* concepts of objects in general [*überhaupt*]” (A11/B25). The transcendental method of the *Critique* is precisely the investigation of the conditions of possibility, developed as the *a priori* elements of both sensibility and understanding, and the mechanism through which that make cognition and experience of objects possible.

This shift to transcendental questions about the possibility of the *a priori* concepts of objects, and equally important, space and time as the *a priori* formal structures of sensibility, is a fundamental turning point in Kant’s introduction of a new revolutionary type of philosophy. However, it also has drastic consequences in terms of how this shift also seems to reconfigure not only philosophy, but more fundamentally, the very possibilities of the world and its objects. This is evident in the B-Edition Preface where Kant writes:

Up to now it has been assumed that all our cognition must conform to the objects; but all attempts to find out something about them *a priori* through concepts that would extend our cognition have, on this presupposition, come to nothing. Hence let us once try whether we do not get farther with the problems of metaphysics by assuming that the objects must conform to our cognition (Bxvi).

It is this reversal, that it is through the structures of cognition that objects are given, that is the fundamental principle of Kant’s so-called ‘Copernican revolution.’ This is made explicit in the very next line, where Kant draws the analogy between this move and that made by Copernicus in abandoning the geocentric model of the solar system in favor of a heliocentric one and explaining the movement of the sun across the sky not by its orbit around the earth, but through the rotation of the earth itself. This shift also entails a reconfiguration of the possibilities open to philosophy, for now questions of *what* is known must be explored through questions of *how* they are known, for it is in the very structures of cognition that these answers will be found, not in further examination of the world, nor in the reductions and creations of pure reason. As Kant

all misinterpretation” (B519n). That Kant’s retreat from the term ‘transcendental’ was due to the accusation of idealism prefigures what will ultimately be Meillassoux’s line of criticism against ‘correlationism’ and ‘transcendentalism.’

puts it later in the *Critique*, “the proud name of ontology ... must give way to the modest one of a mere analytic of the pure understanding” (A247/B303). Thus with Kant, philosophy shifts from attempting to gain knowledge of the world to the process of attempting to set out the conditions of any knowledge through the examination of the knowing subject.

The implications of Kant’s ‘Copernican Revolution’ and the system of transcendental idealism that develops out of and within the limits of the shift it entails, especially with regard to the change in the nature of the ‘object,’ can be drawn out through his own juxtaposition of his transcendental idealism—objects conform to our cognition—with transcendental realism—our cognitions must conform to objects. Kant explicitly makes this distinction himself in the Fourth Paralogism of the A-Edition, where he writes:

I understand by the **transcendental idealism** of all appearances the doctrine that they are all together to be regarded as mere representations and not as things in themselves, and accordingly that space and time are only sensible forms of our intuition, but not determinations given for themselves or conditions of objects as things in themselves (A369).

This is a basic reiteration of a point made earlier in the *Transcendental Aesthetic*, where Kant argued for the transcendental ideality of space and time as the forms of sensibility, that is, the *a priori* conditions of sensibility, which are not acquired through the senses or perception of the world, but rather precede all sensibility and make any such perception possible. The result of recognizing the transcendental nature of space and time is that the results of sensibility are themselves also ideal, that is, as appearances conditioned by space and time, and thus sensibility does not provide direct access to things as they are in themselves. This is particularly important when it comes to considering things as they are external to the perceiving subject—as they are outside the subject who conditions their appearance, a possibility that at face value appears impossible if all spatiality, including conceptions of inside and outside, is determined by the subject. Here the contrast with transcendental realism becomes important. The section from the Paralogism continues:

To this idealism is opposed **transcendental realism**, which regards space and time as something given in themselves (independent of our sensibility). The transcendental realist therefore represents outer appearances (if their reality is conceded) as things in themselves,

which would exist independently of us and our sensibility and thus would also be outside us according to pure concepts of the understanding (A369).⁴

The main difference between these two doctrines is how they consider the relationship between appearances and things in themselves and the implications that these differing relationships will have for the conditions of knowledge of objects. In the former case of transcendental idealism, the appearance of things in space and time is only ever a representation of the thing in itself; while in the latter case of transcendental realism, that appearance claims or attempts to be of the thing as it is in itself including its spatial and temporal elements. What is at stake between these two positions becomes obvious when the status of appearances is considered. For the transcendental idealist, as the appearance in space and time is something that is connected to the very possibility of the representation of the appearance of all objects, namely the conditioning of it in space and time, the spatio-temporal elements of it as it appears are guaranteed as real of all objects as they appear. For the transcendental realist, however, in assuming that everything about the objects of appearances is guaranteed not by the way in which they appear but by their independent existence, finds that there is nothing in the appearance by itself that can guarantee the indubitable reality of things as they appear. Thus it is the transcendental realist who becomes an empirical idealist, i.e., empirical appearances can only ever be ideal and the reality of things, including the reality of space and time are always external and never irrefutably cognizable; whereas the transcendental idealist is an empirical realist, who has a guarantee for the reality of things as they appear in time and space precisely *because* of their externality (appearance in space and thus the objective use of the *a priori* form of sensibility) not in spite of it.

⁴ Both of these sections from the Fourth Paralogism are eliminated from the B-Edition, which moves the entire argument of the Fourth Paralogism to the Refutation of Idealism in the Postulates of Empirical Thought in General in the Analytic. Despite this move, the distinction between transcendental realism and transcendental idealism remains, and indeed plays a key role in both Kant’s negative arguments against dogmatism in the Dialectic and his positive system of transcendental idealism. Henry Allison makes this distinction the defining feature of his analysis of Kant in *Kant’s Transcendental Idealism* (2004). The importance of the argument of the Refutation, especially with regards to the roles of time and space in Kant, is addressed and elaborated in Chapter 5 below.

Despite Kant’s affirmation of the guarantee of the reality of empirical objects both here and in the Aesthetic—“We therefore assert the **empirical reality** of space (with respect to all possible outer experience), though to be sure at the same time its **transcendental ideality**, i.e., that it is nothing as soon as we leave out the condition of possibility of all experience, and take it as something that grounds the things in themselves” (A28/B44)⁵—accusations of subjective idealism, such as that of the *Göttingen Review*, were still leveled at him. Thus in the rewritten B-Edition Preface, along with explicit condemnations of idealism as the “scandal of philosophy” (Bxxxix), Kant also emphasizes the connection and sympathy between his Critical project and the sciences, referring explicitly to Galileo, Torricelli, Stahl (Bxii) and ultimately Copernicus. This final move, the analogy between the revolutionary insights of the *Critique* and the new path for philosophy that it sets out, and that of Copernicus’s decentering and setting in motion of the earth, encapsulates what is at stake in this tension within Kant between the reality of the world and the ideality of knowledge (or at least of the structures of knowledge) of that world.

Kant’s reconfiguration and downgrading of the possibilities of philosophy from actual ontological investigation of the world to an epistemological humility limited to questions of cognition, already works against the affirmed scientific example that he sought to follow. For it was precisely the success that empirical science had in revealing, controlling and understanding the world that was so revolutionary in the work of Copernicus, Galileo or Newton. Their findings, if they are to mean anything, concern the world as it is, not only something about the structure of cognition of those attempting to understand the world. These sciences may, as Kant observes, approach the world by using certain principles of the understanding and reason, mathematical models and abstractions for example, as a way of constructing, conducting and explaining their experiments and observations, but this does not mean that they would claim that the world itself is created by or must conform to those appearances and explanations.⁶ This distinction that Kant introduces between the world as it is and the appearance of the world to, or created by, cognition is in fact the very opposite of how the sciences themselves understand their process and the knowledge they create. Such

⁵ A similar formulation for time can be found at A35-6/B52.

⁶ See Bxiii-xiv for Kant’s summary of the scientific approach to nature.

an opposition is clear from Kant’s own famous and favored example of Copernicus, for in his case appearances would certainly seem to support the observation that it is the sun that circles the earth. As Paul Guyer, in *Kant and the Claims of Knowledge* (1987), observes of this shift by Kant to make the movements of the observer the determining factor in the world, “the resulting image will be more Ptolemaic than Copernican” (3).⁷ As it becomes the position of the observer that determines what is known rather than the movements of the things observed, for Kant this privileged position is that of the knowing subject, while for Ptolemy it is the earthbound astronomer who places herself at the center of knowledge of the movements of the heavens. This ostensible Ptolemaic regression, however, cannot be so simple, for if it is a return it is one that retains some differences to the original geocentrism, and those differences are important.

Guyer identifies two important differences in how Kant’s seemingly Ptolemaic shift is not merely a simple return to the naïve Ptolemaic position occupied pre-Copernicus. Firstly, and most importantly, naïve geocentrism did not recognize a difference between the appearance of the motion of the sun and its reality. This distinction *was only introduced with the Copernican insight that recognized that the real motion of the planets was different to that perceived* and the latter was downgraded to mere appearances. However, secondly, this downgrading also now seems pre-emptive, for even within the Copernican system the appearance of the movement of the sun *is* explained by the movement of the earth, there is in fact no distinction between them and reality. For Guyer this prompts an important question that must be asked about the Kantian revolution, namely, “Why should Kant’s use of a Copernican method in metaphysics give rise to an unbridgeable chasm between appearance and reality which the method does not produce in science itself?” (4). In a sense, this is the fracture that the path of philosophy since Kant has followed, and it is around this question that the accusations of idealism (and later, ‘correlationism’) and the intricacies of transcendental idealism and the Critical philosophy in general should be investigated. All of this appears to support Meillassoux’s accusation that Kant is the ‘catastrophic’ origin of the ‘correlationism’ of contemporary philosophy. Kant explicitly rejects

⁷ Guyer is not the first to make such a claim; Bertrand Russell makes the same accusation in *Human Knowledge its Scope and Limits* (1948, 9).

ontology in the name of epistemology and with his criticism of transcendental realism certainly accomplishes the proscription of naïve realism that Meillassoux attributes to him. Equally, just as Guyer recognizes the problems that Kant seems to run into as he attempts to develop his system alongside the insights and importance of the progression of science, Meillassoux, with his analysis of ‘correlationism,’ develops a very similar account of the development and consequences of Kant’s philosophy.

§2.1.3. Meillassoux’s Genealogy of the ‘Kant event’

Meillassoux levels exactly the same charge against Kant as the one outlined by Guyer: that the so-called ‘Copernican revolution’ of Kant’s epoch-making intervention in philosophy, once subjected to a bit more scrutiny, actually “*gave rise to a Ptolemaic counter-revolution in philosophy*” (2008a, 118). This is a charge that Meillassoux connects specifically to Kant and his claim that the Critical philosophy is intrinsically connected to the project of science. Meillassoux states this in unequivocal terms: “Since 1781 (the date of the 1st edition of the *Critique of Pure Reason*), to think science philosophically has been to maintain that *philosophical Ptolemaism harbours the deeper meaning of scientific Copernicanism*” (118-119). Furthermore, just as Guyer identified that there is a vital difference between the way in which Kant’s philosophy deals with the possibilities of scientific knowledge and how science itself considers the knowledge that it produces, Meillassoux also claims that “Ever since Kant, to think science as a philosopher has been to claim that science harbours a meaning other than the one delivered by science itself – a meaning that is deeper, more originary, and that furnishes us with the truth of the latter” (119). Meillassoux’s assertion is, like Guyer’s, that there is a disconnect between Kant’s avowed aim to provide a philosophical underpinning for science—an aim motivated by the impressive progression of the sciences in Kant’s own time—and the result of Kant’s system, which appears to be in direct opposition to the outcomes of science insofar as it reduces all knowledge (if not the world itself) to something that is only ever relative to the knowing subject and incapable of even discussing the world in itself. Of particular importance is the recognition that Kant himself is deeply influenced by science, and it is in fact in attempting to think through the astounding impact and influence of results

in science that Kant developed his Critical philosophy. Indeed, Kant himself saw his task as providing a firm foundation for a metaphysics that was aligned with the Newtonian science of his day. Recognizing this is very important for understanding both the context in which Kant was working and the specific developments of his project. This connection is addressed in more detail in the examination of the pre-Critical writings and the insights of the Antinomies in §§2.3.1-2.3.2 below. Drawing on this connection and the resulting disconnect, Meillassoux develops what could be referred to as a genealogy of the origin of ‘correlationism,’ which is especially useful in understanding not only his own project, but also as a way to deepen the understanding and context of Kant’s project and system.

Meillassoux’s genealogy comprises three ‘events’: the ‘Copernico-Galilean event,’ the ‘Hume event’ and finally the ‘Kant event.’ In the context of Meillassoux’s wider project of finding a way back to the thing in itself as known or revealed by its mathematical properties, it is the first of these events that is the most important. That he also identifies it as the initial event in the development of the Kantian ‘catastrophe’ reveals that there is some similarity between his own project and that of Kant, that they share at least an origin or originary insight. The ‘Copernico-Galilean event’ stands in for the advances of science, and this, for Meillassoux, entails “the idea of a mathematical knowledge of nature – a nature stripped of its sensible qualities” (2008a, 124). According to Meillassoux, the key point in this mathematization of nature is Galileo’s conception of movement in terms of acceleration, which is an invariant that can account for all potential variations of speed and position (115). The important outcome of this mathematization is that the world can now be taken to be described independently of the sensible qualities of its objects, that is, it is “*separable* from man” (115). It is this separation of humans from the world that Meillassoux sees as the proper significance of science; and it is such separation that plays into his discussion of the significance of the scientific Copernico-Galilean revolution with its de-centering of the world away from human subjectivity and understanding.

Of course, this separation also informs the developments in philosophy that lead up to the ‘Kant event’ and its alleged ‘correlationism.’ For it is because the world is separated from thought that it becomes evident that the project to found physics on rational thought, i.e., the project of (dogmatic) metaphysics, is inadequate, or, as Meillassoux puts it, “the destruction of every form of *a priori* knowledge of why the

world is as it is” (124). This, of course, is the insight of skepticism (the second stage of the ‘canonical distinction’ made by Kant) and thus what Meillassoux refers to as the ‘Hume event’ and is the second step in the development of ‘correlationism.’ Hume’s insight, and the foundation of his skepticism, is that the world can only be discovered and known by experience, not through any construction of reason. The third and final stage is then the ‘Kant event’, which “exposes the collapse of metaphysics ... by turning correlational knowledge into the only legitimate form of knowledge” (125). This is founded not only on Kant’s prohibition on knowing the in itself, but by redefining what is knowledge itself into something only ever constructed in the relation of thinking to world, and the task of philosophy into the examination of that relation between subject and world—the transcendental conditions of possibility of experience, which now are also taken to be the conditions of possibility of objects themselves. The ‘Kant event’ completes the “counter revolution,” of Kant’s self-described Copernican revolution against the Copernico-Galilean revolution of science itself, which was founded on the attempt to know the world as it is beyond (and without) the limits of human experience. Meillassoux speaks of this as the “reversal of the reversal” or the “‘schism’ of modern philosophy,” which he expresses as follows:

it is only since philosophy has attempted to think rigorously the revolution in the realm of knowledge brought about by the advent of modern science that philosophy has renounced the very thing that constituted the essence of that revolution; that is to say, science’s non-correlational mode of knowing (119).

Presented so simply it is difficult to see the subtlety in the ‘correlationist’ position that Meillassoux ascribes to the ‘Kant event.’ It is important to recognize, as Meillassoux does, that the ‘correlationist’ position is aware of the issue of the world in itself and provides an account of the relations between philosophy and the idea of the in itself, which constitutes an important element of the understanding that ‘correlationism’ has with regards to its own place within the developments of both science and philosophy. As Meillassoux describes this understanding:

While modern science discovered for the first time thought’s capacity to accede to *knowledge* of a world indifferent to thought’s relation to the world, philosophy reacted to this discovery by discovering the naivety of its own previous ‘dogmatism’, seeing in the ‘realism’ of pre-Critical metaphysics the paradigm of a decidedly outmoded conceptual naivety (118).

On this account, it was the rift between the world and thought revealed by science, and the indifference and autonomy of the former with regard to the latter, that brought to the fore the inability of thought alone to comprehend the world. However, philosophy imported this insight into its own discourse and from this perspective saw the dogmatism of its own earlier attempts to articulate the world *a priori*. Instead of recognizing the primacy of the power of science, philosophy only saw the results of its own limitations and thus rejected all ‘realism,’ now including that of science, along with its own earlier dogmatism.

The genealogy of ‘correlationism’ that Meillassoux sets out clearly emphasizes the ‘catastrophic’ narrative about the reduction of the real world that he is presenting. Against this Meillassoux will set out his own philosophical ‘speculative materialism’ (121), which will attempt to demonstrate how it is possible for thought to escape the limitations brought out by the rejection of dogmatism and yet still be able to set out a case for a thinking of a reality in mathematical terms, which is indifferent to its own relation to thought.⁸ However, even as this short summary of Meillassoux’s positive project indicates, he shares at least one step with the genealogical account of ‘correlationism’ that he provides, the rejection of dogmatic metaphysics. It is in the face of this rejection that he must develop an alternative speculative metaphysics that avoids the traps of dogmatism. Yet, in doing so, Meillassoux recognizes the place of dogmatism in the history of philosophy and, while he unquestionably rejects dogmatism, he does not entirely ‘avoid’ its distinction as Badiou claimed he did in the Preface. Furthermore, in connecting this rejection with the ‘Hume event’ he also highlights the importance of the role of skepticism in this rejection, although he does not use the term ‘skepticism’ itself. The surprising presence of these two Kantian stages of philosophy in Meillassoux’s own account of the genealogy of both ‘correlationism,’ but also his own ‘speculative materialism’, provides a way to connect Meillassoux and Kant, and brings out an unexpected parallel between their thinking, which can be used as a way to further explore both of their systems.

⁸ Meillassoux’s positive position of ‘speculative materialism’ is addressed and analyzed in §3.3 below.

§2.2. Meillassoux’s Kantian Inheritance: The Rejection of the Principle of Sufficient Reason (and the ontological argument)

The second stage in Meillassoux’s genealogy of ‘correlationism’—the ‘Hume event’—is the point at which he endorses the two Kantian distinctions of dogmatism and skepticism, recognizing the role of the latter in the rejection of the former. It is imperative to pay close attention to Meillassoux’s characterization of this pivotal moment as it contains an important hint to opening up both his interpretation of Kant and the alternative interpretation developed in response. In his brief description Meillassoux writes of how,

the Hume-event constitutes the second philosophical ramification of the Galileo-event by demonstrating the fallaciousness of all metaphysical forms of rationality, which is to say, by demonstrating the fallaciousness of the absoluteness of the principle of sufficient reason (125).

In this passage, Meillassoux pinpoints the rejection of the principle of sufficient reason as the key stage in the development of Kant’s philosophy and ‘correlationism’ in general. It is around this specific point and the many arguments surrounding it, that the present interpretation of Kant is also based. This is not the first time in *After Finitude* that Meillassoux has identified the rejection of the principle of sufficient reason as the key element of Kant’s philosophy, he also brings it up much earlier in the book and the differences between these two discussions open up onto, or within, the distinction between dogmatism and skepticism and how they function and relate in Kant’s philosophy and his philosophical development.

Meillassoux, in his engagement with the ‘Kantian catastrophe’, unquestionably rejects the positive element of Kant’s project—transcendental idealism—as ‘correlationist,’ but he, however, equally unquestionably endorses the negative, truly critical element of Kant’s project—the identification of the rejection of dogmatism and the necessity of a response to the challenge of skepticism.⁹ Observing that in the current philosophical age, “we cannot go back to being metaphysicians, just as we cannot go back to being

⁹ The idea that certain elements of Kant’s philosophy can be endorsed without a full commitment to transcendental idealism has a long history, perhaps most notably, as mentioned in Chapter 1, in Peter Strawson’s *Bounds of Sense* (1966).

dogmatists”, Meillassoux concedes that “On this point, we cannot but be heirs of Kantianism” (29). Here he explicitly shares with Kant one of the three stages of philosophy that Badiou claims he circumvents, and indeed, like Kant this rejection of dogmatism is the starting point from which Meillassoux recalibrates the possibilities of philosophy and through that builds his own philosophical system. But what exactly does this rejection entail? Meillassoux elaborates: “to reject dogmatic metaphysics means to reject *all* real necessity, and *a fortiori* to reject the principle of sufficient reason, as well as the ontological argument, which is the keystone that allows the system of real necessity to close in on itself” (33). There are two important points here: Firstly, that the rejection of dogmatic metaphysics is a rejection of the principle of sufficient reason; and, secondly, that Meillassoux identifies the disproof of the ontological argument as the central move in this rejection.

However, these two articulations of the rejection of the principle of sufficient reason have notable differences. The first, which emphasizes the importance of the ‘Hume event’, is connected to the influence of skepticism on Kant; while the second (although it is set out first in the progression of *After Finitude*) draws on Kant’s own critique of dogmatic metaphysics from within reason, using its own methods against itself, and specifically against a reason organized around the ontological argument, i.e., Descartes. Certainly these are both important elements within Kant’s philosophy and are not entirely unconnected, but considering them separately does match up with the division that Kant himself makes in the *Critique of Pure Reason* between the positive work of the Transcendental Analytic and the negative, properly critical, work done in the Transcendental Dialectic, respectively. These two sides of the rejection of the principle of sufficient reason (the skeptical and the dogmatic, if you like) can thus be used as a way into an examination of the positive and negative elements of the system that Kant develops in the *Critique*. Using the roles of skepticism and dogmatism in Kant’s own Critical philosophy also returns to the observation from the start of this Chapter: that Kant himself also had to pass through those two earlier stages of philosophy in order to develop his own Critical position. Thus, examining how Kant’s own pre-Critical development was also structured by his relations, dalliances and engagements with skepticism and dogmatism will open up an interpretation of Kant that emphasizes the continuities and developments between the pre-Critical work and that of the *Critique*. Such continuity calls into question Meillassoux’s absolute

certainty that Kant’s intervention in the history of philosophy occurred precisely in 1781 with the *Critique of Pure Reason*. The identification of this questioning, which draws out the details and developments of Kant’s philosophy—and especially the place and problems of the principle of sufficient reason—are used in the next Chapter to develop an interpretation of Kant that focuses on the role and importance of time in his system, which returns to the underlying argument of the thesis as a whole.

Exposing and examining this role of time in Kant and his rejection and reconfiguration of the principle of sufficient reason will also be contrasted with Meillassoux, who, it is argued, constructs a very similar argument and position to that of Kant, redefining and reconfiguring the principle of sufficient reason in terms of time and through an examination of reason itself.

In order to illustrate the development of Kant’s philosophical system most clearly, and in terms of how he himself followed the path from dogmatism through skepticism to the Critical philosophy, the two sides of Meillassoux’s claims about the rejection of the principle of sufficient reason are considered in the reverse order to how they have been presented so far; and thus in the order that they actually appear in *After Finitude*. First, in the remaining sections of this Chapter, the ontological argument is considered, both as Descartes presented it and at how Kant rejects it. Kant’s rejection of the ontological argument most famously takes place in the Transcendental Dialectic of the *Critique of Pure Reason*, but that is not his first statement of its rejection. In fact, he had outlined his objections to Descartes as early as 1755 in the essay *A New Elucidation of the First Principles of Metaphysical Cognition* (hereafter *New Elucidation*) and had refined and rearticulated them in 1763’s *Only Possible Argument in Support of the Existence of God* (hereafter *Only Possible Argument*). The first of these, the *New Elucidation*, is especially pertinent, for it is actually more concerned with the principle of sufficient reason and the ontological argument is only treated as an addition to this more fundamental argument (which supports Meillassoux’s connection of the two, albeit not in the context of the *Critique*). Thus, Kant’s criticism of the principle of sufficient reason appeared very early in his work, and returning to this criticism is also pivotal to understanding his later Critical reconfiguration of that principle. These much earlier formulations of Kant’s rejection of the ontological argument (and the principle of sufficient reason) now prompt the question of why, if this rejection is so important to the development of ‘correlationism,’ did Kant remain

in his own dogmatic stage and not complete his own ‘Kant event’ until 1781 with the *Critique of Pure Reason*? In part, this was because the rejection of the ontological argument is not the central issue of the Transcendental Dialectic as Kant presents it, rather for him it is the Antinomies of Pure Reason that are the central to his criticism of dogmatic metaphysics and it was not until 1769 that they, and the impending Critical solution to the challenge they present—the separation of sensibility and understanding—became obvious to Kant.

After discussing the pre-Critical treatment of the principle of sufficient reason in §2.3.1 below, §2.3.2, examines the ‘great light’ with which the Antinomies revealed themselves to Kant and the analysis he provides of them in the Dialectic (along with the critique of dogmatism as a whole). This reveals the importance of the separation of sensibility and understanding to Kant, a necessary element of his Critical philosophy, but one that alone is not sufficient for all the developments and details that appear in the *Critique of Pure Reason*. Kant first made this distinction in the *Inaugural Dissertation* of 1770, although in this work he still retained a certain amount of dogmatism insofar as he asserted that reason, operating through the understanding, was still capable of knowing the thing in itself. The properly Critical philosophy was not complete until the dogmatic remainder was purged from the account given in the *Inaugural Dissertation*, this purging was connected to the further distinction between the understanding and reason. This distinction is examined in the account that Kant gives in the Transcendental Dialectic of how it is reason that naturally and unavoidably leads the understanding beyond the boundaries of justified objective experience; a transgression that results in the creation of the illusory objects of the transcendental ideas, Self, World and God, which Kant confronts in the Paralogisms, Antinomies and Ideal of Pure Reason; arguments examined in §2.3.3. With this account of transcendental illusion in hand, the details of Kant’s eventual confrontation with the ontological argument in the Ideal of Pure Reason are fully addressed, and the difference between the pre-Critical rejection of the ontological argument and the fully extended critique of pure reason and dogmatic metaphysics elaborated. Ultimately, the outcome of the arguments of the Dialectic is the exposure of what Kant calls the ‘true abyss’ of pure reason, and it is as a confrontation with this abyss that he develops his positive system of transcendental idealism. This positive element and the role that

Hume and skepticism played in its development and details are addressed in the following Chapter.

Thus, Meillassoux’s identification of the importance of the rejection of dogmatic metaphysics, and the precise course of this rejection—through the principle of sufficient reason and the ontological argument—provides the structure for the following detailed examination of the pre- and Critical developments of Kant’s arguments, which reveals a subtlety in that path and many of the elements that will become important the forthcoming arguments about the centrality of space and its relation to time within Kant’s philosophy.

§2.3. Kant, the Principle of Sufficient Reason and the Ontological Argument, from the New Elucidation to the Transcendental Dialectic

The ontological argument for the existence of God that Descartes presents in the third of his *Meditations* is deceptively simple: it infers His existence from the definition of Him as a supremely perfect being, for since existence is a perfection He must exist necessarily regardless of whether anyone thinks of Him or not. Descartes’s dogmatic realism is built upon the *a priori* foundation of the existence of this absolute, for as God is perfectly good He would not deceive Descartes about the existence of the external world, if knowledge about that external world arrives as clear and distinct ideas, which for Descartes means mathematics and ultimately the extension of bodies in the external world (and eventually the external world is conceived of as extension and thus as totally mathematizable).

For Meillassoux, Descartes’s ontological argument and the foundation for realism that it provides is the perfect example of naïve or dogmatic realism. It aims, through pure rationality, to prove the existence of an absolute—God—that can serve as a basis for all absolute knowledge and knowledge of absolutes, things that are separate and independent of any knowledge of them. If this stands in for all dogmatic realism, then what Meillassoux finds particularly important in Kant is the critique of the ontological argument, which also refutes the possibility of any dogmatic realism and makes the break after which it is impossible to reach the world through a simple return to any such dogmatic realism. Nevertheless, this does not necessarily mean that Kant’s legacy

must be inherited as ‘correlationism.’ For while it is simple to criticize the ontological argument from a ‘correlationist’ position—and Meillassoux rather succinctly summarizes this as: “because absolute necessity is always absolute necessity for us, necessity is never absolute, but only ever for us” (2008a, 31)—this is not the line that Kant himself takes. Rather, he exposes the sophisticated character of the ontological argument itself and defeats it on its own terms, a strategy that Meillassoux insists is necessary for Kant if he is to maintain the impossibility of knowing the thing in itself through logical principles alone. As the appearance of the thing in itself suggests, the particular instance of Kant’s refutation of the ontological argument that Meillassoux is referring to is that appearing in the Transcendental Dialectic of the *Critique of Pure Reason*; and indeed, this is precisely what he references.¹⁰ However, as noted, Kant’s refutation of the ontological argument is not new to the *Critique of Pure Reason* and appears numerous times, in roughly the same form, in various pre-Critical texts.

The fact that this refutation was so prominent in the pre-Critical period, when Kant was formulating the elements that would later appear in the *Critique*, corroborates Meillassoux’s assertion that this refutation is a necessary stepping-stone in the elimination of dogmatic metaphysics, rather than merely an outcome of Kant’s

¹⁰ This is actually one of the few points where Meillassoux draws on direct textual evidence from Kant, when he quotes the core of Kant’s refutation: “if we reject subject and predicate alike, there is thus no contradiction, for nothing is left to be contradicted” (A594/B622, Meillassoux 2008a, 32). The more famous disproof that Kant puts forward comes slightly after this, and reads, “**Being** is obviously not a real predicate” (A598/B626); and Kant explicitly references Descartes right at the end of his discussion of the ontological argument: “Thus the famous ontological (Cartesian) proof of the existence of a highest being from concepts is only so much trouble and labor lost, and a human being can no more become richer from insight from mere ideas than a merchant could in resources if he wanted to improve his financial state by adding a few zeros to his cash balance” (A602/B630). It is also important to note that Kant’s criticism of the ontological proof in the *Critique* comes in a section where he considers the “only three proofs for the existence of God ... from speculative reason” (A590/B618). These proofs are physico-theological, cosmological and ontological, and their disproof is distinct from Kant’s underlying argument about transcendental illusion in the Transcendental Ideal, which is concerned with the critique of all rationalist theology in line with the entire argument of the Transcendental Dialectic. This argument is examined below in §2.3.3. But for now it is enough to note that there is a separation and distinction *even in the Critique* between Kant’s disproof of the ontological argument and the criticism and analysis of all dogmatic metaphysics that he puts forward in terms of transcendental illusion and the subreptic fallacy, and that the former is not intrinsic to the latter, although closely associated. It is this distinction and the difference between the rejection of the ontological argument and the fuller analysis of transcendental illusion in general, that explains how Kant can reject the ontological argument in 1755 without developing the entire Critical philosophy from that rejection.

transcendental idealism. Thus, although in the *Critique* the refutation of the ontological argument appears in the Dialectic, i.e., after the work done in the Aesthetic, Logic and Analytic, in the overall progression of Kant’s thought it in fact precedes the development of the Critical system. It is then possible to begin to tease out the different elements of the ‘Kantian catastrophe’ in terms of what Meillassoux might characterize as roughly correct and acceptable: the destruction and abandonment of dogmatic metaphysics, and what is the ‘catastrophic’ response to that move: the transcendental idealism—constructed in the Transcendental Analytic—as a precursor to ‘correlationism.’ This set of distinctions reveals the way in which Kant’s development from the rejection of dogmatism to the construction of transcendental idealism, mirrors in miniature Meillassoux’s analysis of the history of philosophy; and thus what he identifies as the turning point of Kant is in fact also a turning point within Kant. Given this new subtlety in the ‘Kantian catastrophe’ it is now possible to, if not indeed necessary to, return to the pre-Critical works and examine precisely how the destruction of dogmatic metaphysics, through the refutation of the ontological argument and the criticism of the principle of sufficient reason, relates to what is to come for Kant in the construction of transcendental idealism in the first *Critique*.

§2.3.1. The Ontological Argument in the Pre-Critical Writings

Kant’s pre-Critical project can be hastily characterized as an attempt to provide a philosophical account of causality that could explain the scientific analyses of the properties of various bodies (hence his very early works on fire and the age of the earth).¹¹ This is indicative of the over-arching aim of Kant to reconcile the insights of (rationalist) philosophy with the astounding discoveries of the natural sciences and especially those of Newton. A particularly clear example of this is the attempt in the essay *Physical Monadology* from 1756 to bring together the unity demanded by the metaphysics of monadology with the infinite divisibility of space required by

¹¹ See Schönfeld (2000) and Laywine (1993), and for excellent summary of the historical context of this project in terms of the debate between the pre-established harmony of thinkers such as Leibniz and Wolff and the physical influx (physical causation) approach adopted by the contemporary sciences see Watkins (2005) Chapter 1.

geometry. This results in an argument that uses the Newtonian forces of attraction and repulsion in order to explain both extensionless monads and the extension of space between them (Watkins 2005, 109). Ultimately and eventually, Kant purges the structures of dogmatism from his system and sides with the Newtonian sciences (and hence physical influx). Much of his subsequent (Critical) work can be seen as an attempt to provide a sound philosophical base for these sciences (a base that limits the pretensions of reason precisely to align the legitimate possibilities of rational thought with these sciences). Even this brief description of the pre-Critical project is enough to see the influence of what Meillassoux called the ‘Copernico-Galilean event.’¹² There is also enough here to follow Meillassoux’s insight that it was the outcomes of the empirical sciences that revealed the insufficiency of dogmatic metaphysics to describe or account for the world. Kant, however, for all his appreciation for the physical sciences, does not merely appeal to them for such a disproof, rather, his thought deconstructs dogmatism from the inside through the structures of reason itself. Kant’s commitment to reason, so much so that he becomes rationally critical of reason, is in part due to his own initial dogmatic position, an explicitly philosophical rather than scientific position, which was due to the contemporary context and dogma of Leibnizian and Wolffian rationalism within which he worked in the mid to late Eighteenth Century.

¹² Despite his importance for Kant and the emphasis on science in general, Newton receives only one reference in *After Finitude*, and that is to point out how his system was replaced by that of relativity (86, Badiou also mentions Newton in passing in the preface, vii). It is Copernicus and Galileo who are the truly revolutionary scientists for Meillassoux despite the fact that it was Newton who came closest to achieving a complete mathematical description of reality, albeit with some major diversions from the rationalist aims that preceded him; for example, the acceptance of the “occult quality” of the instantaneous action at a distance of gravity without further investigating its ‘true cause’ (see Friedman 2001, 9-10). As a scientist Newton famously declined to attempt to draw philosophical conclusions from purely empirical observation and analysis. He goes so far as to declare at the end of the *Philosophiæ Naturalis Principia Mathematica* (hereafter the *Principia*) that, “I frame no hypotheses; for whatever is not deduced from the phenomena is to be called an hypothesis; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy” (547, quoted in Schönfeld, 67). It would be a simplification to say that Kant merely wanted to perform what Newton declined to do, the method of transcendental philosophy works in the other direction, not formulating hypotheses to explain phenomena, but rather setting out the conditions of possibility for those phenomena themselves, and the phenomena that Kant wants to ground through the Critical philosophy are undoubtedly those of Newtonian science.

§2.3.1.1. The *New Elucidation*

The pre-Critical text that best connects criticisms of the ontological argument and an analysis of the principle of sufficient reason is also one of the earliest: 1755’s *A New Elucidation on the First Principles of Metaphysical Cognition*. In this short work, Kant aims to “shed light ... on the first principles of our cognition” (1: 387). In doing so he sets about criticizing some of the most central tenets of dogmatic rationalist thought specifically with reference to Descartes, Christian Wolff and Leibniz. The text consists of three sections. The first takes issue with the Law of Contradiction, in particular the claim that it alone is the absolutely first, universal principle of all truths. Instead Kant demonstrates that the Law of Contradiction—“*it is impossible that the same thing should simultaneously be and not be*” (1: 391)—must itself rest up the principle of identity, which must always be expressed in dual manner in positive—“*whatever is, is*”—and negative—“*whatever is not, is not*”—forms (1: 389). The duality of the principle of identity is necessary to be able to account for both positive and negative truths and provides the underpinning required to be able to move from the purely negative proposition of the Law of Contradiction to be able to assert positive truths through the mediating principle of: “*Everything of which the opposite is false, is true*” (1: 390-391). The result of this analysis is to undermine the rationalist assumption that there can be a single fundamental principle upon which all metaphysics can be constructed (Grier 2001, 19).

The second section of the *New Elucidation* is concerned directly with the principle of sufficient reason, which Kant refers to as the principle of determining ground.¹³ Although here Kant is fundamentally in favour of the principle, he specifically takes aim at the fact that it has been taken by rationalist philosophers in terms of its complete universality (Grier 2001, 21). The line that Kant takes here is similar to his critique of

¹³ The *New Elucidation* was written in Latin and the particular term that Kant uses for reason is *ratio*, in German, reason in this sense is *Grund*. ‘The principle of sufficient reason’ is *principium rationis sufficientis* in Latin and *Satz vom zureichenden Grund* in German. With this in mind the transition that Kant makes from the principle of sufficient reason to determining ground is not such a large step, indeed, even in Latin ‘determining ground’ is *rationis determinantis*. Reason as *Grund* is somewhat distinct from the faculty of reason as it appears in the *Critique of Pure Reason*, where the specific German word is *Vernunft*. Of course reason as *Grund* will have a particular resonance with Kant’s eventual discovery of the ‘true abyss’ of reason at the end of the Dialectic, as ‘abyss’ in German is *Abgrund*.

the Law of Contradiction, and consists of showing that what has been taken to be unitary and universal in fact depends upon a multiplicity of assumptions. In this case he distinguishes between an *antecedently* determining ground (the ground of being or becoming) and a *consequentially* determining ground (the ground of knowing) (1: 392). Having drawn this distinction Kant then uses it to criticize Wolff’s definition of a ground as “that by reference to which it is possible to understand why something should rather be than not be” (1: 393). What becomes more obvious through the earlier distinction between the ground of being and the ground of knowing is that Wolff elides the distinction while at the same time tacitly relying upon it. Simply, to state why a thing *is* rather than *is not* is to state a ground, Wolff asks after the ground of being (“is rather than is not”), but defines it by the ground of knowing (“why”). As Kant puts it:

For if you correctly examine the term [‘why’], you will find that it means the same as *for which ground*. Thus, once the substitution has been duly made, Wolff’s definition runs: a ground is that by reference to which it is possible to understand *for which ground* something should be rather than not be (1: 393).

While the criticism here looks like a charge of circularity, the circle only holds if the distinction between antecedently and consequentially determining grounds is completely elided. The danger of Wolff’s definition, now seemingly rendered circular, really arises when the equivocation actually hides the maintenance of the difference. For it is Wolff’s conflation of epistemological grounds with ontological grounds that erroneously grants causal efficiency to what should in fact be merely epistemological ground: the knowledge of something is taken to be its cause (Grier 2001, 22). Inversely and importantly, such knowledge can comprehend the world as it is, for the knowledge of something, its ‘why,’ is contiguous with its reason for being. This direct move from knowledge to being is perfectly encapsulated in the ontological argument with its movement from some sort of knowledge about God to an assertion about his existence, his being.

It is Kant’s careful maintenance of the distinction between the two kinds of ground and avoidance of the error of Wolff’s reliance on the principle of sufficient reason in its elusive and equivocal ability to determine the existence of things purely through the ground of knowing, that provides the insight for his critique of the ontological argument as it appears in the *New Elucidation*. The distinction that he has previously

established allows Kant to demolish the argument in one succinct step, he writes: “Of course, I know that appeal is made to the concept itself of God; and the claim is made that the existence of God is determined by that concept. It can, however, easily be seen that this happens ideally, not really” (1: 394). Although this criticism does not yet have the technical form that it will later take in the *Critique of Pure Reason*—that existence is not a real predicate—the fundamental insight is the same: that any concept can be thought but as such it only has existence as an idea not as reality.

The *New Elucidation* pre-dates Kant’s discovery of the synthetic/analytic distinction, but already the elements and basic conditions for this distinction and its consequences for metaphysics can be seen. If real existence is not something that is guaranteed by unpacking the logical or epistemological grounds of a thing, i.e., the deductive or analytic method, then it is something that must be added to a concept of an object, that is, the knowledge of the fact of existence is not contained merely in the concept of the thing, and thus due to this addition assertions of existence are synthetic (Guyer 2006, 20). But in 1755 Kant remains committed to the principle of sufficient reason, although now in a form limited and defined as only an antecedent ground, i.e., cause, and goes so far as to provide “the demonstration of the principle of the determining ground, which has now been finally fully illuminated by all the light of certainty, or so at least I am convinced for my part” (1: 396). Such adherence to at least some form of the principle of sufficient reason indicates that Kant remained securely in his ‘dogmatic slumber.’ This dogmatism is evident not only in the maintenance of the principle of sufficient reason but in the argument for God that Kant puts forward to replace the ontological argument he has disproved, this argument is expanded in the 1763 essay on the *Only Possible Argument in Support for a Demonstration of the Existence of God*.

However, the argument that produced the certainty of determining grounds in the *New Elucidation* is only the first step on the path that eventually undermines that very certainty and necessitates the complete rethinking of the principle of sufficient reason some 26 years later in the *Critique of Pure Reason*. The fact that even here the refutation of the ontological argument is an outcome of the clarification of the principle of sufficient reason in terms of determining ground, both antecedent and consequential, suggests that Meillassoux has Kant’s argument the wrong way round. It is not the refutation of the ontological argument that destroys the principle of sufficient

reason, but the problematic nature and careful clarification of the determining grounds that reveals the elusion of the equivocation of reason at work in the ontological argument, and Kant does not have a problem in retaining some version of the principle of sufficient reason while at the same time rejecting the ontological argument. It is significant that the actual refutation of the ontological argument only makes up a small part of the *New Elucidation*, the rest of the essay uses the redefined principle of determining ground to prove the existence of God, the existence of contingent things and two principles, which Kant calls ‘succession’ and ‘co-existence.’ This conjunction of issues becomes very important later in Kant’s thought as in the *Critique* he sets about redefining the principle of sufficient reason in the Second Analogy of Experience (as discussed in §3.2 below). However, as the present concern is the role played by the refutation of the ontological argument it is best to follow this course and return to the *New Elucidation* and the principle of sufficient reason later.

§2.3.1.2. *The Only Possible Argument*

Kant expands on his criticism of the ontological argument in an essay from 1763 titled *The Only Possible Argument in Support of a Demonstration of the Existence of God*. Here, still a good 18 years before the *Critique of Pure Reason*, his refutation has already assumed its famous formulation of “*Existence is not a predicate or determination of a thing*” (2: 72).¹⁴ The once again rather simple argument that Kant presents in support of this is to point out that anything can be considered as something complete that either exists with all of its determinations, or equally not exist at all; and furthermore that “Who can deny that millions of things which do not actually exist are merely possible from the point of view of all the predicates that they would contain if they were to exist” (2: 72).¹⁵ The importance of this clarification plays out in terms of the way in which existence itself must be rethought as something other than a predicate

¹⁴ Compare this with the form that Kant’s refutation takes in the *Critique*: “**Being** is obviously not a real predicate” (A598/B626).

¹⁵ This argument also pre-figures some of the elements of Kant’s Critical discussion of God and rational theology in the Ideal of Pure Reason, where he will commence from the issue of thoroughgoing determination, see §2.3.3.3 below.

and the results that this will have for the relationship between knowledge or thought and being or existence. This rethinking also underpins the ‘only possible argument’ for the existence of God that Kant presents in this text, which in turn influences the way that knowledge and being play out in his later Critical philosophy.

Although the argument that existence is not a predicate is initially found in the first section of Kant’s essay, it is not until the third section that Kant actually uses this insight to disprove Descartes’s ontological argument. While he does not need to extend the argument that he presents in the first section for this explicit disproof, Kant does situate his analysis of the ontological argument within an illuminating examination of other arguments for the existence of God. Kant characterizes two different potential paths for possible proofs of God: “either from the concepts of the understanding of the merely *possible*, or from the empirical concept of the *existent*” (2: 155). The ontological argument is of the former type—as is Kant’s eventual ‘only possible argument’—which moves from the possible as a ground to God as a consequence; the latter type of arguments move in the opposite direction, from the merely possible as already existing consequences to the existence of God as the ground.¹⁶ Kant’s disproof of the arguments of the second kind functions through showing that these arguments in fact depend upon the logic of the first kind: ultimately the search for grounds leads back through contingent things searching for a necessary existent being, which will not be proved by its dependency on anything else, but only fundamentally through its own necessity (2: 158).¹⁷ This reveals the unity of Kant’s argument in this essay, that it is through the disproof of the ontological argument that he can clear the ground for what he takes to be the only possible argument for the existence of God.

Just as he argues that existence is not a predicate, Kant also recognizes that it often is used as such, and it is this usage that supports erroneous path of the ontological argument in search of an absolutely necessary being. Instead of listing existence as simply another predicate that belongs to a subject in the form of ‘x exists’ it is more

¹⁶ These two forms reappear in the *Critique* as the transcendental (ontological and cosmological) and empirical (physico-theological) arguments for God presented in the Ideal of Pure Reason.

¹⁷ Kant presents a similar argument in the *Critique* to tie what he there refers to as the cosmological and physico-theological arguments for the existence of God back to the more fundamental ontological argument (see A630/B658, this is discussed in more detail below in §2.3.3).

correct to say that ‘something existent is x’¹⁸ where x is a subject of various possible predicates (2: 72-3). The relation between predicates and subjects does not in fact have any necessary connection as to whether that subject exists or not. As Kant points out “The relations of predicates to their subjects never designate anything existent; if they did, the subject would then have to be posited as existent” (2: 74). If there was some sort of necessary connection between any predicate and existence then this would have to hold for any predicate as it would be in the positing of that predicate that the subject would also be posited. This points to Kant’s slight redefinition of existence in terms of positing; and also to the equally slight, but important, distinction between relative positing and absolute positing.

While relative positing only indicates the relationship between a subject and its characteristics without determining the existential status of either and remaining in the realm of possibility, to determine something as actual rather than merely possible it must be posited absolutely as both subject and predicate. In terms of a favorite example of Kant’s: three-sidedness is always posited relative to a triangle, but this says nothing about the existence of any triangle, but if a triangle is posited absolutely then all of its predicates, including three-sidedness, must be posited as well.¹⁹ This subtlety indicates another important distinction that Kant makes between *what* is posited and *how* it is posited. In the case of the former there is no difference between relational and absolute positing or between possible and actual subjects, but in the case of the latter there is something more posited through absolute positing, namely the positing of the thing itself. As Kant explains:

I maintain that nothing more is posited in an existent thing than in a merely possible thing (for then one is speaking of the predicates of that thing). But more is posited through an existent thing than is posited through a merely possible thing, for positing through an existent thing involves the absolute positing of the thing itself as well. Indeed, in mere possibility it is not the thing itself which is posited; it is merely the relations of something to something which are posited in accordance with the law of contradiction (2: 75).

¹⁸ Unfortunately Kant does not use this precise formulation as it would match up too neatly with the ‘something in general=x’ of the first edition of the *Critique of Pure Reason*. Instead Kant uses the examples of sea-unicorns (narwhales) and land-unicorns, and also of hexagons in nature, such as beehives.

¹⁹ The triangle also makes an appearance, in the same argument as that presented here, in Kant’s disproof of the ontological argument in the *Critique* (A593-594/B621-622).

It is this careful distinction between possibility and actuality or relative and absolute positing that precludes the traditional form of the ontological argument. It also highlights how there can be a complete conceptual determination of a thing that does not necessarily entail anything about its existential status. However, this distinction also provides the key to the argument for the existence of God that Kant puts forward, which commences precisely from the distinction between possibility and actuality.

Again this progresses from another distinction that Kant makes, this time in the nature of possibility itself and between the logical, or formal, element and the real element. This is close to the distinction between relational and absolute positing, but in this case it is how these concepts relate to possibility itself. The formal element is that which divides possibility from impossibility purely according to the principle of contradiction and only determines what relations can exist between different predicates in the same subject—the impossibility or possibility is only determined by the contradictory or logical relation between predicates, not of the predicates themselves, nor of the subject itself. It is precisely these that are the real or material elements of possibility. To consider the relation between two predicates, or between a predicate and a subject, it must itself already be possible to really consider those elements and thus they must already have a real possibility regardless of the possibilities of their relation (2: 77).

It is this latter, real element that is important for Kant's argument for the existence of God. For the conclusion that he draws from distinguishing these two elements is "that possibility disappears not only when an internal contradiction, as the logical element of impossibility, is present, but also when there exists no material element, no *datum*, to be thought" (2: 78). The simple step from here is to reverse this and point out that the cancellation of all existence would also be the negation of the material element of possibility; it then becomes impossible that nothing exists, as possibility itself requires the existence of its material elements even if their combination is impossible (contradictory). From here, the next step that Kant needs to make is from the necessary presupposition of some existence to the absolute positing of an absolutely necessary being (God). This particular step reconnects up with the issue of determining ground as found in the *New Elucidation*. Kant writes:

Now, this relation of all possibility in general and of each possibility in particular is that it presupposes something real, whether one thing or many. Now this relation to some existence or other can be of two kinds. Either the possible can only be thought in so far as is itself real, and then the possibility is given as a determination existing within the real; or it is possible because something else is real; in other words, its internal possibility is given as a consequence through another existence.

Already the impending connection back to the difference between antecedently and consequential determining grounds is becoming apparent, but Kant makes this almost explicitly clear when he continues:

the actuality, by means of which, as by means of a ground, the internal possibility of other realities is given, I shall call the first real ground of this absolute possibility, the law of contradiction being in like manner its first logical ground, for the formal element of possibility consists in agreement with it. In the same way, that which is real furnishes the data or material element of that which can be thought (2: 79-80).

By explicitly connecting material possibility with the idea of ground Kant shows how this argument for a necessary existence avoids the trap of extending merely logical and consequential determinations to the status of guaranteeing existence. The reality of material possibility must be antecedent to its logical determination through combinations and relations of predicates.²⁰ However, in this move, which connects with the eventual collapse of all arguments from the empirical existence of contingent things to the existence of God back into *a priori* arguments from the internal necessity of things or concepts, Kant also himself makes the mistake of sliding from the conclusion he initially drew—that something actual necessarily exists—to a slightly different, but illegitimate, conclusion: that something necessary necessarily exists, in this case God (Guyer 2006, 22).

What becomes apparent in this slippage in which Kant is guilty of the very fallacy that he himself identifies, is that despite the shortcomings of the conclusions drawn in this essay, Kant nonetheless provides some of the components that he will later, in the *Critique of Pure Reason*, use to demonstrate the futility of any speculative, dogmatic, or metaphysical proof of the existence of God in terms of the *ens realissimum*, the

²⁰ The early Romantics, and Jacobi in particular, used this argument to establish the existence of unconditioned being that necessarily underlies all predication, but which cannot be expressed of known via any of its particular predicated, or conditions, alone. For a discussion of Jacobi’s reading of Kant’s *Only Possible Argument* essay see Frank 2008, 58-62.

most real being. In that later work these components and insights will be used to critique more than just the rationalist arguments for the existence of God, but also to question the very nature and limits of reason itself, of which the ontological argument is only a single example. Although in this earlier work Kant falls prey to an over-extension of reason in the construction of his own *a priori* argument for God, he does however already recognize the treacherous terrain that he is on. Early in the essay he writes: “The mania for method and the imitation of the mathematician, who advances with a sure step along a well-surfaced road, have occasioned a large number of such mishaps on the slippery ground of metaphysics” (2: 71). In presenting another dogmatic argument for the existence of God, Kant is also guilty of such a ‘mishap,’ the shift that will occur as he begins to develop the properly Critical philosophy is that instead of attempting to build something on such ‘slippery grounds,’ he will instead follow through with the line of investigations started in the *New Elucidation* and turn to an examination of ground itself—to the ‘battlefield’ of metaphysics.²¹ But what is it that prompted this shift in Kant’s thinking and how did that shift develop?

These cursory examinations of Kant’s early pre-Critical refutations of the ontological argument come nowhere near fully explicating the development of the later Critical philosophy. That is to be expected as there is a lot of work to be done between the 1763 identification of the “slippery ground of metaphysics” and the solid foundation provided in 1781. In light of the vast difference between these early texts and the mature and all-consuming *Critique*, it is striking that the criticism of the ontological argument across those twenty-odd years remains so stable. However, this is to consider the ontological argument somewhat alone, as Meillassoux does, and this misses the full scale of the later Critical aim to destroy all dogmatic thought in all its forms (or in the three forms that Kant identifies: rational psychology, cosmology and theology, only the last of which concerns God and the ontological argument). There is not enough space to consider all of the different elements leading from the dogmatism of these pre-Critical texts to the rich, full and complex Critical philosophy of the *Critique* (some elements have already been hinted at: the question of the relation and

²¹ With these formulations of ‘slippery ground’ and ‘battlefield’ Kant shifts from a direct discussion of *Grund* as reason and towards spatial geographical metaphors. Such metaphors become more pronounced in the *Critique of Pure Reason* and are addressed below, along with the role they play in Kant’s thinking of space, in Chapter 4.

differences between mathematics and metaphysics that Kant will explore in the *Inquiry* (1764) along with the analytic/synthetic distinction, the distinction between real and ideal in *Negative Magnitudes* (1763), and the deeply skeptical *Dreams of a Spirit Seer* (1766), which resulted in a dogmatic relapse of sorts in the *Inaugural Dissertation* (1770), to mention just a few important developments). However, before progressing directly to a consideration of the Critical work done in the Transcendental Dialectic and the important analysis of Transcendental Illusion and the Transcendental Ideas, it is first necessary to dwell on the pre-Critical period a little longer in order to set the stage for some of the important developments of the Critical philosophy, which will also provide an alternative account of these developments in contrast to Meillassoux’s emphasis on the ontological argument. The issue in question is the role of the Antinomies in Kant’s development, which, as is shown, are of much greater importance for Kant, and in many ways encapsulates the entirety of his critique of dogmatic metaphysics in the Transcendental Dialectic.²²

§2.3.2. The Antinomies, the Fallacy of Subreption and the Separation of Sensibility and Understanding

In the *Critique of Pure Reason* the Antinomies make up the heart of the Transcendental Dialectic and are ostensibly concerned with the problems, errors, contradictions and, ultimately, the illusions that pure reason encounters when it attempts to obtain cosmological knowledge concerning the world.²³ As such, the Antinomies most directly reflect the outcome of the pre-Critical project of the reconciliation of dogmatic rationalism and the outcomes of scientific investigation into

²² Although they are often referred to as the ‘Antinomies’ in the plural, in the *Critique of Pure Reason* Kant refers to the singular Antinomy of pure reason, which comprises four different “conflicts of the transcendental ideas.” With this in mind I nonetheless follow the convention of the literature in referring to the ‘Antinomies’ in the plural as this better expresses the diversity of the fundamental idea as it also appears in other forms elsewhere in Kant’s work and as the general concept that is only given one particular form and expression in the *Critique*.

²³ The role that the Antinomies play in the eventual doctrine of transcendental idealism and thus the inseparability of the ‘positive’ and ‘negative’ elements of Kant’s Critical philosophy is outlined by Grier (2001, 2006) and Allison (2004). Ultimately this will be important to the complete description of Kant’s system, but at this point it can remain unelaborated.

the world. They arise when reason alone attempts to address the world that is the object of empirical scientific investigation, i.e., when it attempts cosmology. That this project is now reconsidered as something that is itself problematic and that generates the conflicts of the Antinomies is one of the shifts that are part of the transition to the properly Critical philosophy of the *Critique*. It is thus part of the influence of the ‘Copernico-Galileian event’ in overcoming dogmatism, but worked through from the side of reason itself, not by merely importing the results of science into philosophical discourse.

In the *Critique*, Kant presents four aspects of this conflict examining, in turn, (1) the issue of the boundary of the world in space and time, (2) the conflict of composites and simple parts; (3) the question of causation and free will, with specific attention to human freedom; and, (4) the postulation of an absolutely necessary being. This simple outline alone is enough to show that the actual scope of the Antinomies in the *Critique* extends beyond the merely cosmological. For while the first two are clearly concerned with the world, the relevance of the second two is not so obvious as they seem to concern specific entities or issues within the world.²⁴ The extension of the subject matter of the Antinomies beyond their allocated scope of cosmology into what are better described as the subject matter of the Paralogisms (rationalist psychology and the investigation of the self or soul) and the Ideal (rationalist theology and God) suggest that the Antinomies can be seen in some degree to stand in for the entirety of the Dialectic and the critique of dogmatic rationalism in general.²⁵ Kant himself, in a

²⁴ Kant divides the Antinomies along similar lines, naming the first two ‘mathematical’ and the latter two ‘dynamical.’ Jonathan Bennett suggests that these names are unhelpful and can thus be ignored (1974, 116). The division of ‘mathematical’ and ‘dynamical’ follows from a similar division that Kant makes in the table of the categories between the ‘mathematical’ categories of quantity and quality and the ‘dynamical’ categories of relation and modality (see B110). As this division of the categories was added in the B-Edition it most likely follows from the division as Kant makes it in the Principles of the Pure Understanding. There, the Axioms of Intuition and the Anticipations of Perception (i.e., the principles that correspond to the first two categories—quantity and quality) are characterized as ‘mathematical’ and the Analogies of Experience and the Postulates of Empirical Thinking in General (corresponding to the categories of relation and modality respectively) are called ‘dynamical’ (A162/B201, see also the note that Kant adds in his copy of the A-Edition (also at B201) for an expansion of this division.

²⁵ There is some evidence in the *Reflexionen* to suggest that Kant initially envisaged the Transcendental Dialectic wholly in terms of the Antinomies and that the expansion and development of the Paralogisms and the Ideal of Pure Reason were a relatively late development in the writing of the *Critique*. See *Reflexionen* R4756-4760 (17: 699-713) for

letter to Christian Garve from September 1798, identified the Antinomies as the origin of his critical path. He writes:

It was not the investigation of the existence of God, immortality, and so on, but rather the antinomy of pure reason ... that is what first aroused me from my dogmatic slumber and drove me to the critique of reason itself, in order to resolve the scandal of the ostensible contradiction of reason with itself (12: 257-8).

Similarly, in the *Prolegomena* he refers to the cosmological ideas produced by pure reason in its transcendent use as that which “works the most strongly of all to awaken philosophy from its dogmatic slumber” (4: 338). Both of these statements contradict the emphasis that Meillassoux puts on the refutation of the ontological argument as the key moment in the development of Kant’s Critical philosophy. Similarly, Kant’s use of the term ‘dogmatic slumber’ here is in tension with the better-known assertion that Hume awoke him from such ‘slumber’ (this is the line that Meillassoux takes (2008a, 124)). In this state the Antinomies remain part of the purely negative criticism of dogmatic metaphysics, but in the historical role that they play within the development of Kant’s thought they also importantly contain within them the key to the shift towards the development of his positive philosophical system of transcendental idealism. This is evident not only in the role that he retrospectively applied to them in the letter to Garve, but also in R5037, a *Relexionen* from around 1776-78, during the so-called ‘silent decade’ in which he was composing the *Critique*, where he writes:

Initially I saw this doctrine [transcendental philosophy] as if in twilight. I tried quite earnestly to prove propositions and their opposites, not in order to establish a skeptical doctrine, but rather because I suspected I could discover in what an illusion of the understanding was hiding. The year ’69 gave me a great light (18: 69).

Kant’s initial sketch of the Dialectic in terms of the Antinomies; and R5552-5555 (18: 218-35), dated from around 1778-79, for work on their expansion into the extended Dialectic found in the *Critique*. See also, Allison (321 and 497n.25). Several commentators—Strawson (1966, 159-60), Bennett (1974, 283), and Walsh (1997, 176)—have suggested that Kant’s critique of metaphysics would have been more coherent if he had carried through with this earlier, wholly Antinomical version of the Dialectic.

The specification of 1769 in this note is very important as it draws a connection between Kant’s consideration of what would later become the Antinomies in the *Critique*—proving propositions and their opposites, and by extension the Transcendental Dialectic as a whole—and the shift that occurred in his thinking in 1769, which precipitated the further development of the Critical philosophy and especially the doctrines of transcendental ‘error’ and ‘illusion’, which will become integral elements of the analysis and diagnosis of the Dialectic.

However, there is also an important difference between this *Reflexionen*, written in the silent decade before the full version of the *Critique* and the Dialectic appeared, and itself referring back to 1769, well before the full development of the Critical philosophy, and the later observations and assertions about the Antinomies in the *Prolegomena* and the letter to Garve. Namely, in those retrospective considerations of the Antinomies and their place in the Critical philosophy Kant refers to the contradiction of *reason* and specifically reason in its *transcendent* use, whereas in the earlier consideration, where he importantly notes the role of *illusion*, he is, however concerned not with reason but with the *understanding*. While in his earlier writings—in particular the *Inaugural Dissertation* of 1770, a mere year after the ‘great light’ of 1769—Kant is concerned with the ‘illusions’ of the understanding; eventually, in the *Critique*, this distinction between the understanding and reason will play an important role in the Dialectic, which as the later letter to Garve makes explicit is concerned with reason itself and the scandal of the contradictions that appear when it is used in a transcendent way. Consequently, there are two types of problems exposed by the Antinomies, one concerned with the understanding and the other with reason itself (although this division is only apparent from the perspective of the later Critical philosophy as in 1769-70 Kant still considered reason and the understanding as a single faculty). These two problems will eventually play out in the *Critique* in terms of *error* and *illusion*, which operate through the understanding and reason respectively (this is problematized by Kant’s own phrase “illusion of the understanding”, however it is plausible to assume that this initial misguided search for such ‘illusion’ resulted in the discovery of both the errors of the understanding and the illusions of reason and the

distinction between the two).²⁶ The aim of the present section, however, is to argue that the Antinomies played an important role in Kant’s abandonment of dogmatic metaphysics and the development of the Critical philosophy, and thus it is necessary to return to the earlier work of the late 1760s and early 1770s to examine the developments that Kant made in this period, which set the ground for the later Critical philosophy and also provide an important insight into the eventual critique of both the errors of dogmatic metaphysics and the unavoidable illusions of reason (a distinction that Meillassoux does not make, but which will reveal Kant’s philosophy to be more subtle than the characterization provided by Meillassoux).

The shift that occurred in 1769—the ‘great light’—was Kant’s recognition of the distinction between the sensible and the intelligible.²⁷ The result of this discovery was the *Inaugural Dissertation* of 1770 and is clearly evident in its full title: *On the Form and Principle of the Sensible and Intelligible World*. In order to understand the full extent of Kant’s illumination is it necessary to stress that the distinction he makes between sensibility and intelligibility goes beyond the previous distinctions drawn between them, for example Leibniz’s theory that perceptions were merely indistinct ideas, and asserts that they are totally distinct and their difference is in *kind* not merely strength or type of perception. This is a distinction that remains a central element of Kant’s philosophy right throughout the Critical period and actively structures the positive element of the *Critique of Pure Reason* where Kant writes that there are “two stems of human cognition, which share a common but unknown root, namely **sensibility** and **understanding**, through the first of which objects are given to us, but

²⁶ Kant does not himself make such an explicit distinction between error and illusion as is sketched out here. Indeed, in the *Critique*, they often are put forward together and in a fairly intertwined way (Allison 2004, 322). So much so that even Henry Allison admits that in the first version of his celebrated study of the *Critique*, *Kant’s Transcendental Idealism* (1983), he mistakenly conflated the two in terms of the error of transcendental realism and transcendental illusion. The distinction is carefully argued for by Michelle Grier (2004), who Allison credits as the “important corrective” to their mistaken identification, of which even he was guilty (Allison 2004, 499n.18).

²⁷ This position is supported by Amerkis (1992, 51), Keuhn (1983, 184 n.37) and is elaborated at length by Beck (1978). Chapters 4 & 5 below approach this distinction and the ‘great light’ of 1769 from the other side, so to speak, through Kant’s analysis of space as intuition in the 1768 essay on *Directions in Space*. This is not to downplay the importance of the Antinomies or their analysis of reason, as they also are concerned with issues of space in terms of the boundary and composition of the spatial (and temporal) world.

through the second of which they are thought” (A15/B29).²⁸ Although these two faculties will also be joined by that of reason in the Transcendental Dialectic, an addition that marks the transition to the properly Critical philosophy.²⁹ At the earlier stage of the *Inaugural Dissertation*, however, Kant subsumed reason under the faculty of the understanding, and had still not fully escaped the dogmatic possibilities of rationalism found in that faculty. Indeed, in some ways the *Dissertation* can be seen as a regression back into dogmatism after the more skeptical *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics* from 1766.³⁰ This is because the *Dissertation*, after having made the separation between sensibility and intelligibility, still allows the latter to provide cognition of noumena (at this stage still identified with the things in themselves) through reason alone, or “representations of things *as they are*” (2: 392). Conversely, sensibility provides representations of things as they appear, or phenomena, which Kant argues is determined by the two forms of time and space (described in §§13-15 of the *Dissertation*). However, the understanding is not entirely dogmatic—although Kant explicitly says that it has a dogmatic use in proving the existence of God and moral perfection—it also has a negative *elenctic* use, necessary to “keep what is sensitively conceived distinct from noumena” (2: 395). The restrictive use of the understanding also reveals the resolution of the problems of the Antinomies,

²⁸ These ‘two stems’ provides the structure of not only cognition but also the positive part of the *Critique* itself, where the Transcendental Aesthetic examines the sensible elements of cognition, the Transcendental Logic the conceptual, and the Transcendental Analytic the possibility and legitimacy of a connection between them. The distinction between them, which is central to Kant’s Critical philosophy, already pre-empts the forthcoming analysis of the illusions of reason, which can be summarized in Kant’s well-known line: “Thoughts without content are empty, intuitions without concepts are blind” (A51/B75). It is the ‘blindness’ of reason when it is detached from sensibility that leads it into darkness and obscurity. The details of this distinction as it appears in the *Critique* are elaborated in Chapter 5 below.

²⁹ Here I maintain the convention of the terminology of the ‘faculties,’ although this term as a translation of the German ‘*Vermögen*’ is problematic as it misses the sense of ‘capability’ or ‘ability’ that the German contains and instead suggests that the faculty is a *thing* that can be located. In the First *Critique* Kant occasionally refers to ‘imagination’ as a third faculty, and he certainly does so in the Third *Critique*, where he also adds the faculty of desire, further multiplying the number of faculties that he discusses and problematizing just as much as he clarifies their relations. As this shows, there is a certain ambiguity in Kant about the precise number of faculties or the exclusivity of sensibility and understanding at the primary faculties of cognition. There is no simple answer or resolution to this ambiguity.

³⁰ This judgment is made by Keuhn (1983, 183), but a fuller examination of the toing and froing of Kant’s ‘love affair’ with metaphysics (Kant’s own description of this relation in *Dreams of a Spirit-Seer* (2: 367)) and his oscillations between dogmatism and skepticism can be found in Amerkis (1992).

as it is through ignoring or overlooking this limit that the illusion of the Antinomies appears in the first place. In this context of the earlier *Dissertation*, with its conflation of reason into and with the understanding, these are the ‘illusions of the understanding’ that R5037 spoke of, and which were revealed through the antinomous thinking of propositions and their opposites. However, Kant still maintained that it was possible for the understanding (and reason) to discover dogmatically the noumena and thus have access to ‘reality.’ These two uses of reason—dogmatic and elenctic—are the first hint of the separation between the understanding and reason as it will develop in the *Critique*, and the associated distinction between error (the dogmatic use of the understanding) and illusion (which, in the form of the regulative ideas, is close to the elenctic use of reason).

In the fifth and final section of the *Dissertation* Kant turns to a discussion of the ‘method of metaphysics,’ “concerning what is sensitive and what belongs to the understanding” (2: 410). Here he identifies, and takes steps to avoid, the illegitimate contagion of sensitivity by the understanding, which entreats sensibility to transgress its limits and which results in ‘illusion.’ Kant writes:

But since the illusions of the understanding, produced by the covert misuse of a sensitive concept, which is employed as if it were a characteristic mark deriving from the understanding, can be called ... *a fallacy of subreption*, the confusion of what belongs to the understanding with what is sensitive will be the *metaphysical fallacy of subreption* (an *intellectuated phenomenon*, if the barbarous expression may be pardoned) (2: 412).

The diagnosis of both the fallacy of subreption and the metaphysical fallacy of subreption develop into the conception of transcendental or metaphysical error that Kant provides in the *Critique* (the language of ‘subreption’ continues) and is central to his criticism of the transcendental realism of dogmatism, which was only possible once the dogmatic remainder within the *Dissertation* was also purged from his thinking. At this stage in the *Dissertation*, Kant still maintained that the understanding was capable of dogmatically knowing noumena—the reality of the thing in itself, and it is this ability of the understanding that is central to the illusions produced when sensibility and the understanding are intermingled. The illusion occurs when the purely subjective appearances of phenomena provided by sensibility, are treated as if they are produced by the understanding and thus objective and real noumenal objects.

Having described and named the process by which the illusions of the understanding are created, Kant then provides an example of the confusion involved, which is very close to what is to be examined later in terms of the Antinomies. Drawing on his earlier delineation of space and time as the fundamental principles of sensibility in Section 3 of the *Dissertation*, Kant shows that it is precisely through attempting to pass off these sensible forms as if they were something that necessarily belonged to the understanding and hence things in themselves, that an illusion appears. The illusions in question are very similar to what will later be called the two ‘mathematical’, or, as they were characterized, more properly cosmological Antinomies. Both of these concern the possibility, or rather impossibility, of discovering the limit or origin of an infinite series, in the case of the first antinomy it is one that reaches back *in time* towards the origin of the universe, and in the second back *through space* towards the simplicity of composite matter. In the *Dissertation*, Kant separates out the principles that give rise to the contradictions as such:

According to the laws of the pure understanding, namely, any series of caused things has its own *principle*; that is to say, in a series of caused things there is no regress which is without a limit. According to sensible laws, however, any series of co-ordinates has its own specifiable *beginning*. The propositions, of which the latter involves the *measurability* of the series and the former the *dependence* of the whole, are mistakenly supposed to be identical (2: 415, §28).³¹

While neither of the propositions on their own are problematic, the fallacy arises when they are taken to apply to the same thing and sensible and intelligible cognitions mix illegitimately resulting in the dual assertion that things both have a beginning and do not, or are infinitely divisible and ultimately simple. As Kant summarizes the cause of this conflict, “they suffer nonetheless from the blemish of their origin” (2: 416), i.e., the fallacy of subreption in the mistaken identification and thus misattribution of the nature of the objects and the faculties that revealed them.

This is the same as the basic structure of the Antinomies as they appear in the *Critique*, where the Thesis of each antinomy argues from the rationalist side of the

³¹ The specification of the role of *principles* here, as creations or the medium of the understanding, returns to Meillassoux’s characterization of Kant’s critique of dogmatism as showing how the forms of thought cannot themselves be derived from *principles* that endow them with absolute necessity (see §2.1.1, above). Here Kant’s critique goes deeper and attempts to show the problematic and limited nature of principles in general.

understanding—that every conditioned object has a totality—and the Antithesis argues from the empiricist side of sensibility—within the forms of space and time—that every object is conditioned (Kuehn 1983, 188).³² It is the focus on the *totality* of conditions, and the resulting attempted cognition of the *world* of objects in its entirety, that leads to the cosmological conflicts of the Antinomies. The problem is that both sides of each Antinomy are, within themselves, valid arguments, and in this sense they set the two sides of dogmatism and empiricism (or skepticism), and thus the two earlier stages of philosophy, directly against each other. In the Third Section of the Antinomy (A462-76/B490-504) Kant examines the strengths and weaknesses of both dogmatism (the theses) and empiricism (the antitheses) and concludes that both are as good as each other and yet both are also as problematic as each other, and thus neither side of any such Antinomy is capable of resolving the Antinomy as a whole. In place of these unresolvable tensions (and in place of both dogmatism and empiricism) Kant presents his own Critical solution to the conflicts of the Antinomies.³³ This solution is a rejection of both sides of each Antinomy as illegitimate due to the metaphysical fallacy of subreption and the resulting mistaking of appearances for things in themselves, which is due to an erroneous position of transcendental realism. Thus, in Section Six of the Antinomy Kant will present “Transcendental idealism as the key to solving the cosmological dialectic” (A490/B518).

The basic tenets of transcendental idealism and its opposition to transcendental realism were briefly examined in §2.1.2, above. That examination was drawn from Kant’s discussion of this opposition in the Paralogisms, another section of the Dialectic that precedes the Antinomies in the structure of the *Critique*. In Section Six of the Antinomies Kant rearticulates this distinction as the key to showing the errors of the Antinomies and ultimately how he resolves them through the rejection of both the Thesis and Antithesis as illegitimate due to their commitment to transcendental realism and the metaphysical fallacy of subreption. He commences this Section by stating that:

³² Although the Antitheses are purportedly empiricist and skeptical, they nonetheless also become dogmatic insofar as they go beyond simply negating the thesis and assert the truth of the contrary view (Allison 2004, 387; see A472/B500)

³³ Again this structure of the Antinomies as a direct confrontation of dogmatism and skepticism contributes to the primacy of their role in Kant’s development as both a passage through and also an overcoming of both of these positions.

We have sufficiently proved in the Transcendental Aesthetic that everything intuited in space or in time, hence all objects of an experience possible for us, are nothing but appearances, i.e., mere representations, which, as they are represented, as extended beings or series of alterations, have outside our thoughts no existence grounded in itself. This doctrine I call **transcendental idealism**. The realist, in the transcendental signification, makes these modifications of our sensibility into things subsisting in themselves, and hence makes **mere representations** into things in themselves (A490-1/B518-19).³⁴

This is the metaphysical fallacy of subreption as it appears in the *Critique* and as it aligns with the doctrine of transcendental realism. As it is described here, in terms of transcendental realism (i.e., the confusion of appearances and things in themselves), this fallacy looks slightly different to how it was described in the *Dissertation* in terms of the confusion of sensibility and understanding. This difference is accounted for by the recognition that the transcendental realist assumes, or argues that, it is possible to know things in themselves and to know that the appearances of sensibility are direct representations of those things in themselves, and thus the understanding (of things in themselves) becomes connected to the sensible representation (of things in themselves). This goes beyond the more restricted use of the understanding as the means of formal synthesis of the material provided by sensibility that Kant has set out in the Transcendental Analytic,³⁵ and shows how the transcendental realist’s use of the understanding strays towards dogmatism (even in the empirical dogmatism of the Antitheses).

This brief discussion of the difference between transcendental idealism and realism also contains within it a reference back to the first two ‘mathematical’ or ‘cosmological’ Antinomies. In pointing out how things in space and time are represented as “extended beings” and as “series of alterations,” Kant is referring to the

³⁴ In this setting out of ‘transcendental idealism’ Kant adds a footnote to the B-Edition, where he points out that he has also “occasionally called it **formal** idealism, in order to distinguish it from **material** idealism, i.e., common idealism that itself doubts or denies the existence of external things” (B518-19). This is obviously in response to the charge of (Berkleyean) idealism put forward in the *Göttingen Review* after the publication of the A-Edition, and Kant’s distancing of himself from the language of ‘transcendental.’ It also gestures towards how Kant considers such common idealism to be another manifestation of the same structure of transcendental realism (on this see the Appendix of the *Prolegomena* (4: 365-83), and Allison 2004, 38-42).

³⁵ Kant’s analysis of this process of synthesis is examined and elaborated in Chapter 5 below.

Second and First Antinomies respectively. The First Antinomy sets the Thesis that the world must have a beginning in time and a limit in space against the Antithesis that the world is infinite in time and space; and, the Second Antinomy sets the Thesis that matter is ultimately composed of simples against the Antithesis that it is infinitely divisible. The Antinomies arise, in Kant’s view, when issues of space and time are illegitimately ascribed to things in themselves rather than correctly restricted to appearances. The rationalist thus takes the concepts of space and time and attempts to show that the world must be bound by them, either in series or divisibility, while the empiricist take the experience of space and time and attempts to argue that the world itself must conform to the conditions of that experience, either in infinite causal series or divisibility. Kant rejects both of these positions, arguing that such spatio-temporal issues are only ever applicable to objects of experience and not to the thing in itself. As he writes: “The non-sensible cause of these representations is entirely unknown to us, and therefore we cannot intuit it as an object, for such an object would have to be represented neither in space nor in time (as mere conditions of our sensible representation), without which conditions we cannot think any intuition” (A494/B522). The arguments of the Theses and the Antitheses of all four Antinomies are guilty of attempting to do precisely this, to consider the totality of the world as a thing in itself, in terms of the conditions of space and time, both as concepts and as they are experienced.

In this way Kant shows the errors at work in both the Theses and Antitheses of the Antinomies—the subreptions that occur due to their transcendental realism—and resolves them by removing the assumption or requirement of such transcendental realism and instead showing how time and space are purely sensible conditions. Thus the problems that they prompt are only applicable to the appearances of objects as they are conditioned in time and space, and not capable of extension to the world as a whole as a means of understanding it. However, in doing so, Kant has not extended himself very far beyond the results of the *Transcendental Analytic*, with its rigorous separation and setting out of sensibility and understanding as the two stems of knowledge and experience, and the identification of the metaphysical fallacy of subreption in the *Inaugural Dissertation*, which functions by illegitimately transgressing this distinction. Indeed, in the Appendix to the *Transcendental Analytic*—a section titled, ‘On the amphiboly of the concepts of reflection through the confusion of the empirical use of

the understanding with the transcendental’—Kant has already diagnosed what will become conflict set out in the Antinomies. There, he observes that “Leibniz **intellectualized** the appearances, just as Locke totally **sensitized** the concepts of the understanding” (A271/327).³⁶ Here, Leibniz and Locke stand in for the Theses and Antitheses of the Antinomies respectively. The notion of transcendental reflection that Kant sets out in the Amphiboly is the means whereby sensibility and understanding are put in their place, and the fallacy of subreption is avoided or prevented.³⁷ Given this work done in the Analytic, the further analysis provided in the Dialectic and Antinomies would be totally superfluous if it merely stopped at this point, having dismissed the errors of transcendental realism and the fallacy of subreption that leads to and supports such realism. The Dialectic, however, goes further and attempts to discover *why* these errors and fallacies occur, and it is doing so that Kant turns away from the issue of the relation of sensibility and understanding and to his critique of pure *reason* [*Vernunft*] properly, as a faculty distinct from both sensibility and now also the understanding.

§2.3.3. Reason and Transcendental Illusion in the Dialectic

³⁶ This characterization of Leibniz recalls the description of the dogmatic metaphysical fallacy of subreption as an “*intellectuated phenomenon*,” the “barbarous phrase” that Kant used in the *Inaugural Dissertation*.

³⁷ Kant sets out the problem of the amphiboly of concepts of reason and the role of transcendental reflection at A269-70/B325-6:

The concepts can be compared logically without worrying about where their objects belong, whether as noumena to the understanding or as phenomena to sensibility. But if we would get to the objects with these concepts, then transcendental reflection about which cognitive power they are objects for, whether for the pure understanding or for sensibility, is necessary first of all. Without this reflection I can make only a very insecure use of these concepts, and there arise allegedly synthetic principles, which critical reason cannot acknowledge and that are grounded solely on a transcendental amphiboly, i.e., a confusion of the pure object of the understanding with the appearance.

What is described here as the transcendental amphiboly is what is, in the Dialectic, referred to as the fallacy of subreption, which results in the errors of transcendental realism; and it is reflection that guards against such confusions. It is also worth noting how this passage makes clear that noumena are not directly the things in themselves, but rather the idea of things in themselves as they are considered by the understanding. This is an important and sometimes overlooked distinction that Kant makes.

As it has been described thus far, the analysis of Kant’s philosophical intervention as he made and characterized it has diverged from the account of the ‘Kant event’ that Meillassoux describes. Kant’s criticism of the ontological argument significantly pre-dates the Critical turn of the *Critique of Pure Reason* and its doctrine of transcendental idealism. Furthermore, on closer analysis, it is the Antinomies and the cosmological ideas that they involve that are more important in the development of transcendental idealism. Finally, this analysis of the Antinomies does not (so far) focus directly on Kant’s criticism of reason (or the principle of sufficient reason), but on how he abandons both the dogmatism of the Theses and the skepticism of the Antitheses, in favour of his Critical transcendental idealism, which, with the fallacy of subreption, to paraphrase Meillassoux’s description of the rejection of dogmatism, demonstrates the fallaciousness of all metaphysical forms of the *understanding* (not reason).³⁸ However, as noted above, the Transcendental Dialectic *does* contain Kant’s criticism of the ontological argument, and it *does* subject reason to a rigorous interrogation. In fact, this interrogation is the main advancement of the *Critique* over the *Dissertation* (and of the Dialectic over the Aesthetic and Analytic, although the former draws on elements defined in the latter), and attempts to answer what was left open in the earlier work, and what has been left open in the discussion of the Antinomies so far: *why* does reason lead the understanding to these fallacious positions?

The answer to this question brings together three elements from the initial discussion of the Antinomies and Kant’s self-avowed awakening from his dogmatic slumber: (1) the “scandal of the ostensible contradiction of reason with itself” (Letter to Garve); (2) “reason in its transcendent use” (*Prolegomena*); and, (3) the “illusion” (R5037), now no longer of the understanding but of *reason*. Kant’s actual critique of pure reason combines all three of these elements and shows how reason naturally and unavoidably through its own use and progression comes into conflict *with itself* as it attempts to become transcendent, and this produces an equally natural and unavoidable *illusion*, which is the cause of the error of transcendental realism produced by the metaphysical fallacy of subreption. As Henry Allison puts it: “in following the demand of reason to

³⁸ It is worth noting that in the terms of the *Inaugural Dissertation*, this also amounts to the fallaciousness of the *dogmatic* form of understanding/reason. The *Critique* defines the understanding with this limitation already in mind as it separates reason from the understanding as two distinct faculties.

think the unconditioned, the understanding is invariably led to violate the conditions for its own legitimate employment” (2004, 318). While such errors are avoidable and can be corrected through the transcendental reflection outlined in the *Amphiboly* and the proper separation of sensibility and understanding, the illusions produced by reason, which lead the understanding to such a transgression, cannot so simply be dismissed, only recognized and used appropriately in all their illusoriness. This recognition of the illusions of reason, and the prevention of the errors that it creates, is thus very similar to the *elenctic* use of the understanding/reason described in the *Inaugural Dissertation*.

The discussion thus far has focused on the role of the Antinomies and appropriately enough they also provide a clear path to an examination of Kant’s doctrine of transcendental illusion and the faculty of reason. Indeed, Michelle Grier succinctly observes that, “Kant takes the first two (mathematical) Antinomies to be particularly important for showing the way in which illusion generates error on the assumption of any transcendently realistic standpoint” (2006, 200). Kant himself, in Section Seven of the Antinomy (the ‘Critical decision of the cosmological conflict of reason with itself’), also points out the errors of the Antinomy—i.e., both the Thesis and the Antithesis—can be dismissed, but that the analysis also provides a path back to the illusion that *caused* the confusion between appearances and things in themselves and thus the errors:

Accordingly, the antinomy of pure reason in its cosmological ideas is removed by showing that it is merely dialectical and a conflict due to an illusion arising from the fact that one has applied the idea of absolute totality, which is valid only as a condition of things in themselves, to appearances that exist only in representation, and that, if they constitute a series, exist in successive regress but otherwise do not exist at all (A506/B534).

The conclusion that Kant draws from this particular section is a support for the transcendental ideality of appearances and a further argument for the conclusions of the Transcendental Aesthetic. However, in referring to the illusion that causes the errors of the Antinomies, Kant also hints at the analysis of reason that is the major aim of the Dialectic and what it provides in addition to its support for the conclusions of the Aesthetic and Analytic.

To comprehend fully the transcendental illusions produced by reason it is necessary to return to the start of the Dialectic and examine how Kant distinguishes reason from sensibility and understanding, and how reason is naturally lead to the unavoidable illusions that Kant discusses under the name of the ‘transcendental ideas.’ This is because the source of transcendental illusion lies in the nature and logic of reason itself and the distinct way in which it attempts to further knowledge beyond the capabilities of sensibility and the understanding. The full importance of transcendental illusion and the role that it plays not only in the positive development of transcendental idealism, but in the Antinomies and Dialectic and thus in Kant’s Critical philosophy as a whole, is emphasized by Kant in the *Critique of Practical Reason*, where he provides a brief summary of the First *Critique* and writes of how

reason is forced to investigate this illusion – whence it arises and how it can be removed – and this can be done only through a complete critical examination of the whole pure faculty of reason; thus the antinomy of pure reason, which becomes evident in its dialectic, is in fact the most beneficial error into which human reason could ever have fallen, inasmuch as it finally drives us to search for the key to escape from this labyrinth (5: 107).

This summary reinforces the role of the Antinomies and specifically connects them to transcendental illusion, which in turn becomes the important focus of the Critical analysis of the faculty of reason, and as such is particularly ‘beneficial’ to philosophy as a whole. Kant’s analysis of the distinct faculty of reason and the inevitable illusions that it produces also explains the tripartite structure of the Dialectic, as the three forms of the logical syllogism result in three different illusions of self, world and God, the three transcendental ideas criticized in the Paralogisms, Antinomies and Ideal of Pure Reason. This examination of reason and the account of the transcendental illusions and ideas thus shows how the arguments of the Dialectic extend beyond the ontological argument, which Meillassoux argues is a central element of Kant’s rejection of dogmatism. Examining the wider context of the Dialectic does, however, mean that the details of Kant’s Critical rejection of the ontological argument can be elaborated fully. Specifically, how, for Kant, the ontological argument and the cosmological argument for God are closely connected (along with the third physico-theological argument), all of which is, in turn, a form of the argument for a most real being, which relates to the Fourth Antinomy. All of this leads to what he calls the “true abyss” of human reason (A613/B641), against which he will set the ‘transcendental ideas’ as illusory points of

reference that allow the understanding to progress ‘as if’ there were a possible unity of the world. This analysis deepens the divergence between Meillassoux’s characterization of the ‘Kant event’ and the interpretation of Kant’s criticism of pure reason developed here. Ultimately, the next Chapter returns to the details of the Analytic to show how Kant Critically reformulates the principle of sufficient reason in terms of sensibility and understanding in the form of the possibility of transcendental time-determination, which will reveal a surprising set of similarities (and problems) with regards to Meillassoux’s ‘avoidance’ or ‘abandonment’ of Kant. However, this analysis of the Dialectic, transcendental illusions, the ‘true abyss’ of human reason and the transcendental ideas, is nonetheless important for the eventual close examination of the roles of space and time (and the co-implication of the two and thus the centrality of the former along with time within Kant’s thought) in Chapter 5, as it provides much of the context for what will be discussed there.

§2.3.3.1. The Doctrine of Transcendental Illusion

Building on the work done in the earlier *Inaugural Dissertation* and the Transcendental Analytic, Kant starts his examination of reason in the Transcendental Dialectic by situating it in relation to sensibility and understanding. He writes: “All our cognition starts from the senses, goes from there to the understanding, and ends with reason, beyond which there is nothing higher to be found in us to work on the matter of intuition and bring it under the highest unity of thinking” (A298/B355). Although, as discussed above, the Dialectic will in fact spend a lot of time locating and exposing the fallacy of subreption and maintaining the distinction between sensibility and understanding, it is ultimately interested in the underlying operation of reason, which is responsible for the generation of the illusions that prompt the understanding to transgress its boundaries. It is the distinction of reason from the understanding that is the advancement of the *Critique* over the earlier *Inaugural Dissertation*. This brief description of the functions and aims of the faculties also foreshadows the eventual positive role of reason that Kant will draw out of his Critical work at the very end of the Dialectic. This positive role is found in the notion of unity that reason strives towards, and Kant will eventually argue that even in its illusory form this notion of

unity is nonetheless important for the progression of the empirical sciences in the form of the regulative ideas.

Both the understanding and reason (as well as sensibility) are what Kant calls ‘faculties,’ but where the understanding (as set out in the *Transcendental Logic*) is a faculty of rules, reason is the faculty of principles (A299/B356).³⁹ The important distinction here is that the faculty of rules does not generate its own content. For the understanding, content is provided by sensibility which is then schematized under the categories. In contrast the faculty of principles uses a concept to cognize everything that is subsumed under its conditions. As Kant puts it, “The understanding constitutes an object for reason, just as sensibility does for the understanding” (A664/B692). He does, however, note that there can be no corresponding schema for the understanding, although there is something like an “analogue” of a schema (A665/B693).⁴⁰ In this way reason moves beyond the simple synthesis of the understanding to synthesize products of the understanding itself, i.e., judgments.

The logic of reason connects two judgments so that the concept of one explains the condition of the other. The basic form of this logic is the syllogism, where the concept of the major premise (the universal rule) subsumes the conditions of the minor premise in order to make a mediate inference that escapes from the immediate understanding (judgment) of either premise. As Kant puts it: “reason in its logical use seeks the universal condition of its judgment (its conclusion), and the syllogism is nothing but a judgment mediated by the subsumption of its condition under an universal rule (the major premise)”. This logical use of reason in turn immediately exposes what Kant calls it ‘real use,’ and here the first element in the doctrine of transcendental illusion makes its appearance. Kant continues:

³⁹ Again, this connects back to Meillassoux’s description of Kant’s refutation of dogmatism in terms of a critique of the possibility of any *principles* that could provide absolute necessity.

⁴⁰ Accordingly, as objective knowledge or experience is only possibly in terms of the ‘two stems’ of sensibility and understanding, and as reason has removed itself from sensibility, reason itself can properly have no objects. As Kant puts it, “pure reason is never directly related to objects, but instead to concepts of them given by the understanding” (A335/B392). This does not, however, prevent reason from *presuming* to deal with objects, only that now, in Kant’s view, these objects are only ever illusions of objects. The details of the schema and the section of the *Critique* titled the Schematism is examined in more detail in Chapter 5 below.

Now since this rule is once again exposed to this same attempt of reason, and the condition of its condition thereby has to be sought (by means of a prosyllogism) as far as we may, we see very well that the proper principle of reason in general (in its logical use) is to find the unconditioned for conditioned cognitions of the understanding, with which its unity will be completed (A307/B364).

The very structure of reason—the syllogism—seeks this constant subsumption of the conditioned under a concept until it achieves unity, which means that the only possible completion and thus unification of the chain of prosyllogisms is in something unconditioned. This injunction to 'find the unconditioned for any conditioned,' is the first step in the doctrine of transcendental illusion, what Michelle Grier refers to as P₁, for the sake of brevity I will follow her in this terminology (see Grier 2006, 196; 2001, 119ff, also Allison 2004, 330). It is also the way in which reason always attempts to get beyond any of the conditioned cognition of the understanding. However, reason itself goes further than merely this injunction to find the unconditioned. As Kant continues, this 'logical maxim' becomes the principle of reason only when it is assumed that when any conditioned is given so too is the entire chain of conditions, which in its unity (finding its completion in an unconditioned) is itself unconditioned, as there is nothing outside of it upon which it depends, it has, in itself become (or at least assumed by reason to have become) a thing in itself. Of this shift from a chain of conditions culminating in an unconditioned to the assertion that the entirety of the chain is unconditioned, Kant writes: "when the conditioned is given, then so is the whole series of conditions subordinated one to the other, which is itself unconditioned, also given" (A307-8/B364). This is what Michelle Grier calls P₂ (2006, 196; 2001, 121ff), the second step in the doctrine of transcendental illusion, and the most important element, because it is this premise that makes the step directly from any conditioned, and especially the conditioned cognitions of synthesized sensibility and understanding, to the unconditioned absolute totality that will characterize every illusory transcendental idea, and is the aim of reason in its transcendent use. As it is itself unconditioned this principle has now detached itself from the understanding and experience altogether—it no longer relies upon sensibility. Nonetheless, it still presents its own set of objects, only now these objects appear as transcendent and unconditioned, but in fact, as lacking in any sensible element, they are illusions produced by the principle of reason. It is this secondary ascription of the unconditioned

to the entity produced by reason’s natural quest for the unconditioned that is the core of transcendental illusion.

Such an illusion is produced by positing the metaphysical existence of a *transcendent* entity that is beyond all and any conditions. This occurs not by a mere transcendental use of the categories of understanding, which is constrained by Critical philosophy to prevent this happening, but by the drive of reason to overcome the transcendental limitations placed on knowledge by Critical philosophy.⁴¹ Kant writes:

We will call the principles whose application stays wholly and completely within the limits [*Schranken*] of possible experience **immanent**, but those that would fly beyond these boundaries [*Grenzen*] **transcendent** principles. By the latter I do not understand the **transcendental** use or misuse of categories, which is a mere mistake of the faculty of judgment when it is not properly checked by criticism, and thus does not attend enough to the boundaries of the territory [*Grenze des Bodens*] in which alone the pure understanding is allowed to play; rather I mean principles that actually incite us to tear down all those boundary posts [*Grenzpfähle*] and lay claim to a wholly new territory [*Boden*] that recognizes no demarcations anywhere (A295-6/B352).

Again, Kant contrasts the principle of reason that leads to illusion with ‘mere mistakes’ of the faculty of judgment, the errors produced by the fallacy of subreption, which can be corrected by criticism and the transcendental reflection outlined in the Amphiboly. Such errors and mistakes still operate through the transcendental functions of sensibility and understanding, this is why the error they are guilty of is transcendental realism. Illusion, in contrast, goes further, leaving behind the ‘territory’ of the understanding and legitimate experience. The particularities of the spatial geographical metaphors of boundaries and territory and the details of the German terms are addressed in Chapter 4 below; but at this stage, the important element of this section of the Dialectic is the way in which reason, in its drive towards illusion operates through *transcendent* principles. That is, it supposes to identify things that transcend the immanent boundaries of experience. In this sense, as a drive to discover *things*, it must now be asked what sort transcendent and unconditioned *things* does reason aspire to discover? Kant answers this question through an analysis of the very operation of reason itself, in the form of the different types of syllogism.

⁴¹ This argument supports Kant’s statement in the *Prolegomena* that his dogmatic slumber was disturbed by the cosmological ideas produced by reason in its *transcendent* use (4: 338, see §2.3.2 above).

§2.3.3.2. The Transcendental Ideas

Having shown the source of transcendental illusion in the mechanism by which reason reaches beyond its own conditions to try and grasp something transcendent and unconditioned, Kant now aims to show precisely what are these unconditioned concepts of reason. Because the totality of any unconditioned chain of prosyllogism is also the set of relations between the concepts and that which is conditioned by them within that totality, it is the possibilities of the categories of relation that determine the possibilities of the concepts of reason. Kant explicitly states this:

There will be as many concepts of reason as there are species of relation represented by the understanding by means of the categories; and so we must seek an **unconditioned, first** for the **categorical** synthesis in a **subject, second** for the **hypothetical** synthesis of the members of a **series**, and **third** for the **disjunctive** synthesis of the parts in a **system** (A323/B379).⁴²

He also states this much more directly in a *Reflexionen* from around 1779, where he writes: “The concept of the totality of synthesis in accordance with the categories of relation is the pure concept of reason.” (R5555, 18: 231). The three categories of relation are: 1) Of inherence and subsistence; 2) Of causality and dependence; and, 3) Of community (reciprocity between agent and patient) (A80/B106). These particular categories have already played an important role earlier in the *Critique* in the Analytic, where they, as the Analogies of Experience, provided the foundation for the schematism of time-determination.⁴³ Their re-appearance here as the foundation of the three transcendental ideas that make up the Dialectic mirrors that earlier elaboration, only this time from the perspective of reason rather than experience. The fact that there are no transcendental ideas for the rest of the categories seems like a departure from

⁴² These three forms of the syllogism—categorical, hypothetical and disjunctive—are set out as the logical functions of relation in the Table of Judgments at A70/B95.

⁴³ The details of this argument, the nature and place of time-determination, and the role of the Categories of Relation within it are explicated in the next Chapter, see §3.2 below.

Kant’s usual architectonic considerations and perhaps hints that these particular categories play a greater role in the *Critique* than is usually acknowledged.⁴⁴

The ‘concepts of reason’ are related directly to the three different forms of syllogism that organize their chain of conditions: categorical, hypothetical and disjunctive; but it is through drawing out how these are also the process by what is universal in every relation becomes apparent that Kant transitions from the concepts of reason to the transcendental ideas. Moving from his claim that “all the relation of representations of which we can make either a concept or an idea are of three sorts: 1) the relation to the subject, 2) to the manifold of the object in appearance, and 3) to all things in general” he determines that:

Consequently, all transcendental ideas will be brought under **three classes**, of which the **first** contains the absolute (unconditioned) **unity** of the **thinking subject**, the **second** the absolute **unity** of the **series of conditions of appearance**, the **third** the absolute **unity** of the **condition of all objects of thought** in general. (A334/B391)

And in turn these three classes correspond to psychology, cosmology and theology respectively and the objects of those disciplines: the *soul* (self or subject), the *world* and *God*, which structure the form of the Dialectic as Kant examines each of these illusory objects and disciplines in turn in the Paralogisms, Antinomies and Ideal respectively (A340/B398). These objects are posited, through subreption and hypostatization, as transcendent entities by each of their respective disciplines and are then used to re-construct their metaphysical systems upon these unconditioned unities. However, by Kant’s analysis these unconditioned unities are rather illusory results of reason’s injunction to seek the unconditioned, and are posited inherently by the illegitimate use of reason in the rationalist methodology. The aim of the Dialectic is not to disprove these illusions totally, that is impossible as they are natural results of reason, but rather to escape their deceptiveness by denying that they relate to any

⁴⁴ Paul Guyer argues that there is evidence in the *Reflexionen* that Kant initially defined the categories entirely in terms of what later became only those of relation (1987, 66). This argument, and the importance of the categories of relation, is returned to in §3.2 below in consideration of the Analogies of Experience.

transcendent entity that actually exists and thus not falling prey to the fallacy of subreption (Allison 2004, 332).⁴⁵

Kant refers to the three illusory objects produced by reason as “transcendental ideas” (A311/B368). He adapts the terminology of ‘ideas’ from Plato, for whom the ideas are beyond the realms of both the sense and the understanding and yet also as the “archetypes of things in themselves” (A313/B370).⁴⁶ Obviously, given that for Kant experience, knowledge and ultimately objects are only ever determined through sensibility and understanding, such Platonic ideas as expressions of the true reality of things are inadmissible and illegitimate to the system of knowledge as it is defined by transcendental idealism. Why then does Kant retain this language of the ‘idea’ with specific relation to Plato? The answer is because he recognizes that in a sense *Plato was correct* about the progression of reason beyond the senses—beyond being—and yet *was also mistaken* about the conclusions of what was found beyond being. Kant writes of how:

⁴⁵ Kant sets this out when he states that the Transcendental Dialectic,

can never bring about that transcendental illusion (like logical illusion) should even disappear and cease to be an illusion. For what we have to do with here is a **natural** and unavoidable **illusion** which itself rests on subjective principles and passes them off as objective ... Hence there is a natural and unavoidable dialectic of pure reason, not one in which a bungler might be entangled through lack of acquaintance, or one that some sophist has artfully invented in order to confuse rational people, but one that irremediably attaches to human reason, so that even after we have exposed the mirage it will still not cease to lead our reason on with false hopes, continually propelling it into momentary aberrations that always need to be removed (A298/B354-5).

⁴⁶ In *The Republic*, Plato specifies that these ideas, and in particular the form of the good, are “beyond being [*epekeina tes ousias*]” (205: [509b]). Thus pre-empting Kant’s geographical metaphor that sets out how reason transgresses certain boundaries. Heidegger, in the *Beiträge*, defines Kant’s treatment of the Ideas in the *Critique of Pure Reason* in terms ‘saving’ them as “principles of ‘reason’ qua human reason” (2012a, 166: [213]), and as an important development from the Platonic ideas as *epekeina tes ousias* (164: [210]). Seeds of Kant’s reversal of Plato can be seen in the opening lines of the 1766 essay *Dreams of a Spirit-Seer, Elucidated by Dreams of Metaphysics*, where in reference to both the ‘dreams’ of the mystic Emmanuel Swedenborg and also those of dogmatic metaphysics such as Plato, Kant writes: “The realm of shades [*Schattenreich*] is the paradise of fantastical visionaries” (2: 317). Here Kant reverses Plato’s famous analogy of the cave and attributes a shadow-existence not to the ‘real world’ as does Plato, but to the illusory visions created by reason as it soars beyond the legitimate bounds of cognition. As the next line puts it, in a prefiguration of the language that will appear in the *Critique*, “Here they [the visionaries] find a country without frontiers [*ein unbegrenztes Land*] which they can cultivate at their pleasure” (2: 317). Again, along with the geographical metaphors of boundaries and land, comes a metaphor of darkness and shadows, a trope that appears in many places in Kant as he considers the outcome of rationalist dogmatism, or as he puts it elsewhere ‘enthusiasm’ [*Schwärmerei*]. The connection between the spatial geographical metaphors, darkness and enthusiasm is addressed in Chapter 4 below.

Plato noted very well that our power of cognition feels [*föhle*] a higher need than that of merely spelling out appearances according to synthetic unity in order to be able to read them as experience, and that our reason naturally exalts itself to cognitions that go much too far for any object that experience can give ever to be congruent, but that nonetheless have their reality and are by no means figments of the brain (A313-4/B370-1).

This shows just how seriously Kant takes Plato’s ideas and by extension the illusory transcendental ideas that he diagnoses as a result and malaise of reason. For although the Platonic and the transcendental ideas are both problematic, this does not mean that they can be simply dismissed or eliminated, they still ‘have their reality’ and that reality must be dealt with, comprehended and understood by philosophy. Thus Kant can continue a few pages later:

They [transcendental ideas] are concepts of pure reason; for they consider all experiential cognition as determined through an absolute totality of conditions [i.e., the combination of P₁ and P₂]. They are not arbitrarily invented, but given as problems by the nature of reason itself, and hence they relate necessarily to the entire use of the understanding. Finally they are transcendent concepts, and exceed the bounds [*Grenze*] of all experience, in which no object adequate to the transcendental idea can ever occur (A327/B384).⁴⁷

Here Kant highlights how the ideas, even if they are illusory, are not arbitrary or whimsical inventions of a baroque system of reason, but rather a natural development of reason, and thus *any* analysis (or use) of reason must contend with the ideas at least as problems produced by reason.⁴⁸ Kant, however, goes further than merely leaving them as a problem, for he identifies that they somehow relate necessarily to the entire use of the understanding, which must include the legitimate use of the understanding in the cognition that is experience (i.e., the synthesis with sensibility). Thus, although the ideas are now no longer entirely ‘beyond being’ in the Platonic sense, but are

⁴⁷ This section once again states the *transcendent* aspirations of these ideas and how they overstep all boundaries [*Grenzen*].

⁴⁸ He later refers to them once again as “unavoidable illusions” which do not “arise contingently, but have sprung from the nature of reason” and that “even the wisest of all human beings cannot get free of them; perhaps after much effort he may guard himself from error, but he can never be wholly rid of the illusion, which ceaselessly teases and mocks him” (A339/B397). This clearly sets out the difference between error and illusion, for while the former can be dismissed through transcendental reflection, the latter still persists to ‘mock’ reason.

nonetheless still beyond the bounds [*Grenzen*] of experience, they also turn out to be necessary for the possibility of that experience and somehow connected or related to it, and thus reason is still an important element within Kant’s system despite his all-consuming critique of it.⁴⁹ One outcome of Kant’s detailed analysis of the way in which reason compels the understanding to transgress its legitimate boundaries, is that the location and function (and potential destruction) of those boundaries becomes clear and the constraints of legitimate objective knowledge are clearly laid out. Ultimately however, the ineliminable and necessary role of the transcendental ideas is how they are regulative of the operation of the understanding by each providing what Kant terms a *focus imaginarius* which can orient reason in the dark, abyssal and groundless state that Kant leads it to.⁵⁰ The best way to examine these more complex outcomes of Kant’s analysis of the illusions of reason is to turn to his direct analysis of God and world in the Ideal and Antinomy of Pure Reason, which also returns to the wider issue of this Chapter and the question of how Kant’s refutation of the ontological argument relates to his full critique of reason, and in turn to the issues that Meillassoux brings up concerning realism, ‘correlationism’ and the existence of the ‘real world.’

⁴⁹ However, it must be noted that even here in the First *Critique*, i.e., before the detailed examination of morality and freedom in the Second *Critique*, Kant still recognizes that in dealing with nature he is concerned with reason in its ‘speculative’ use (A328/B384, A329/B386), that is, with how it attempts to get beyond those carefully set out bounds of experience, or to subsume the sensible aspects of experience as in Leibniz’s intellectualization. Kant nonetheless recognizes that there is, or at least may be, a practical use of reason that *will* lead to knowledge of freedom and God, but this is different to the attempted speculative use, which leads to the ideas. This is precisely the way in which Meillassoux, in the setting out of his own positive philosophical position, also uses the term ‘speculative.’

⁵⁰ Michelle Grier highlights how Kant uses the idea of a *focus imaginarius* that is similar to the optical illusions (especially the illusion that an object in a mirror appears ‘behind’ or beyond a mirror when really it is behind the viewer looking into the mirror) that Newton discusses in terms of optics (Grier, 2004, 37-8). Kant himself specifically compares the ineliminability of transcendental illusions to that of optical illusions; such as how the moon appears bigger on the horizon than when it is high in the sky, an appearance that persists even if the astronomer knows that the moon in reality maintains a constant size (A297/B354). Kant use of an astrological and specifically orbital example here and an explicit discussion of the difference between ‘illusory’ appearances and ‘reality’ also provides another angle of the charge of Ptolemaism in the analogy that he makes between his own system and that of Copernicus (see also §5.8.3 below). Grier also characterizes the role of the ideas as ‘giving direction’ in darkness (2006, 192). The explicit issues of darkness and orientation are important in the analysis of Kant’s spatial metaphors and also his explicit discussion of space undertaken in Chapters 4 & 5 below.

§2.3.3.3. The Transcendental Ideal, the Ontological Argument and the ‘True Abyss’ of Reason

Kant’s argument against the ontological proof of the existence of God, to which Meillassoux gives such importance in *After Finitude*, occurs in the context of Kant’s critique of rational theology, which takes God as a transcendent object (or, in Kant’s view, as a transcendental idea). However, there is more to this context than merely an examination of particular rationalist arguments for the existence of God, as this set of transcendental illusions has its source in the third category of relation—community—and the class of the absolute unity of all objects of thought in general. Thus, there is a much wider concern than merely the specific object that is God. Likewise, the seemingly small distinction that Kant draws between the conditions of appearance (the world and hence cosmology and the Antinomies) and the condition of all objects of thought in general (God) is also significant in two important ways. Firstly, rather than betraying an anachronistic overly religious concern, the distinction between God and world guards against the charges of Spinozism and pantheism. Secondly, the distinction between appearance and all objects of thought is parallel to the distinction between the objects of legitimate objective cognition (in Kant’s technical sense) and the thought of the thing in itself. As Kant maintains that it is possible to think the thing in itself even if it is impossible to know it, this means that reason can apply its chain of prosyllogism to search for both of these concepts; and while the world is the result of the series of all conditions of appearance (objective cognition), God is the result of all thought in general, including the thing in itself.

This connection between God and the thing in itself explains why Meillassoux treats the critique of the ontological argument as central to the rejection of dogmatic realism, as even within the confines of Kantian Critical philosophy with its distinction between objective knowledge of objects and the thought of the thing in itself, the mere thought of the thing in itself can provide a starting point from which reason attempts to posit an unconditioned and transcendent object. Kant himself is much more rigorous than Meillassoux’s brief précis of the ontological argument suggests and shows how what is at stake in rational theology is more than just God, but also knowledge of the absolute unconditioned unity of all objects of thought, including the thing in itself. For this reason Kant in fact sets up the Ideal of Pure Reason not directly in terms of God, but

rather in terms of the ‘most real being,’ the *ens realissimum*, which is the main focus of the Ideal while the direct rationalist arguments for the existence of God are treated somewhat separately. The wider consideration of the *ens realissimum* in the Ideal brings out the links not only to the Fourth Antinomy and its treatment of an ‘absolutely necessary being,’ but also to the argument for the existence of God that Kant presented in the *Only Possible Argument* essay.⁵¹

The Ideal of Pure Reason can be roughly divided into two parts. The first three sections discuss the issue of the Ideal in terms of thoroughgoing determination and the most real being (the *ens realissimum*). Kant then examines what he describes as the “three kinds of proof for the existence of God possible from speculative reason” (A590/B619). These are the ontological, cosmological and physico-theological arguments for God, which he assesses and dismisses respectively in Sections Four, Five and Six of the Ideal. There is a seventh and final section of the Ideal concerned with the “critique of all theology from speculative principles of reason” (A631/B659), which is both a summary and a positioning of the Ideal in relation to more recognized versions of theology.

The distinction between the two rough parts of the Ideal—the discussion of the *ens realissimum* and the disproof of the specific arguments for God—corresponds to the distinction between illusion and error. The latter arguments for the existence of a particular transcendent entity, i.e., God, are examples of the hypostatization that results from the fallacy of subreption.⁵² The distinction between the three arguments comes from what they take as their starting point. The ontological argument starts from the idea of things in general; the cosmological from the experience of things in general and the physico-theological from determinate experiences, and all progress to purportedly demonstrate the necessity of God (A590-1/B618-9, cf. A620/B642). Kant calls the first two ‘transcendental’ arguments and the final one an ‘empirical’ argument. Ultimately, he shows that both the physico-theological and the cosmological arguments are

⁵¹ On the shift from the *Only Possible Argument* to the Ideal of Pure Reason in the *Critique*, see Fisher & Watkins (1998).

⁵² Kant charts the progression from pure reason to the theological God in a footnote at the end of Section Two. He describes how, “This ideal of the supremely real being, even though it is a mere representation, is first **realized**, i.e., made into an object, then **hypostatized**, and finally, as we will presently allege, through a process of reason in the completion of unity, it is even **personified**” (A583/B611).

dependent upon the ontological argument (so in this sense Meillassoux is correct in attributing at least some primacy to the ontological argument); although in the case of the latter this is more like a co-dependency, as demonstrating the concept of absolute necessity required for both arguments works both ways across both its pure concept and the concept of some thing in which it finds itself (A612/B641). Kant is unequivocal in his intention to defeat all of these arguments, stating that he, “will establish that reason accomplishes just as little on the one path (the empirical) as on the other (the transcendental), and that it spreads its wings in vain when seeking to rise above the world of sense through the mere might of speculation” (A591/B619).⁵³ Kant’s arguments against each particular attempted proof of God have been well rehearsed (see, for example, Wood 1978, 95-147) and the basic form of the refutation of the ontological argument was already present in the pre-Critical writings (See §2.3.1), rather than going over the details of these refutations again, the argument presented here follows Michelle Grier and focus on the illusion that underlies the Ideal and how reason pushes the understanding into the errors of rationalist theology, and then in turn examine the consequences that Kant draws from this.

It is the discussion of the *ens realissimum*, the most real being, that reveals the operation of transcendental illusion in the Ideal. As with all transcendental illusion, the idea of the *ens realissimum* arises from the natural and unavoidable demands of reason itself. In the case of the Ideal, the form of reason that leads to the *ens realissimum* is the disjunctive syllogism connected to the third category of relation, community. This is why Kant’s discussion of the *ens realissimum* begins with the issue of thoroughgoing determination, because, “The logical determination of a concept through reason rests on the disjunctive syllogism” (A576/B604). Kant sets out the issue of thoroughgoing determination at the start of Section Two of the Ideal, he writes: “Every **concept**, in regard to what is not contained in it, is indeterminate, and stands under the principle of **determinability**: that of **every two** contradictorily opposed predicates only one can apply to it.” Insofar as this is both concerned with concepts alone and with their form and not their content, this is, as Kant puts it,

⁵³ Kant repeats this metaphor of reason in flight at the end of his discussion of the physico-theological proof (A630/B658). He also presents it in the Introduction, specifically with reference to Plato’s aim to “abandon ... the world of the senses” by going “beyond it on the wings of ideas, in the empty space [*leeren Raum*] of the understanding” (A5/B9).

“nothing but a logical form of cognition” (A571/B599). From this merely logical form of cognition Kant draws out the principle of thoroughgoing determination, which applies this form not merely to concepts, but to things. He writes: “Every **thing**, however, as to its possibility, further stands under the principle of **thoroughgoing determination**; according to which, among **all possible** predicates of **things**, insofar as they are compared with their opposites, one must apply to it” (A571-2/B599-600). This goes beyond the merely logical application of the principle of contradiction, for, as Kant observes, “besides considering every thing in relation to two contradictory conflicting predicates, it considers every thing further in relation to **the whole of possibility**; as the sum total of all predicates of things in general” (A572/B600). This issue of the relation of any thing to all possible things highlights how the category of community is at work in the Ideal. The core of this argument is that from any thing that is determinable, and determinability is a condition of thingness, there must be a relation to the whole of possibility. The next step that Kant argues for is very similar to his argument in the *Only Possible Argument* essay, as he steps from possibility in general to the material of possibility, what he calls “a transcendental substratum” which, “contains, as it were the entire storehouse of material from which all possible predicates of things can be taken,” and which furthermore, “is nothing other than the idea of an All of reality (*omnitudo realitatis*)” (A575/B603). It is in this idea of the All of reality that Kant finds the concept of the *ens realissimum*, and it is this concept of the most real being that is hypostatized into the theological conception of God.⁵⁴ As Kant concludes in the final paragraph of Section Two: “we subsequently hypostatize this idea of the sum total of all reality” (A582/B610).⁵⁵ The results of this

⁵⁴ The Ideal is far from a perfect argument. Indeed, Kant does not really *argue* for this step from the All of reality to the *ens realissimum* as much as assert it; a state of affairs that leads commentators such as Jonathan Bennett to dismiss it as “an unconvincing tale” (1974, 282). For more on this problem see Grier (2001, 234-45; 2006, 267-72) and Wood (1978, 57-9). Kant makes a similar jump when he merely asserts that the *ens realissimum* would be “best suited” to the “concept of an unconditionally necessary being” (A586/614), which both prompts his development of the specifics of the ontological and cosmological arguments, and also the connection of the Ideal back to the Fourth Antinomy.

⁵⁵ The affirmation of the ‘sum total’ of all reality in this concluding paragraph seems to be in tension with Kant’s earlier assertion that “the highest reality would ground the possibility of all things as a **ground** [*Grund*] and not as a **sum total**” (A579/B607). This distinction, and the clear affirmation that the highest reality, i.e., God, is a ground and not a sum total, is how Kant avoids the potential charge of Spinozism and pantheism, which in the Eighteenth Century was equivalent to atheism and a contentious (and polemically targeted) position. As Kant is

hypostatization are the particular arguments of rationalist theology, which are now all shown to be errors generated by the underlying illusion arising naturally out of reason itself.

Having presented this argument about the illusion of reason that produces the specific errors that rationalist theologians present for the existence of God, Kant, at the very start of Section Three, problematizes this argument. It is this problematization that is examined in the present discussion of the Ideal, rather than a detailed examination of the intricacies, and problems, of Kant’s account of the role of the *ens realissimum* in the Ideal. The very first paragraph of Section Three reads:

In spite of its urgent need to presuppose something that the understanding could take as the complete ground for the thoroughgoing determination of its concepts, reason notices the idea and merely fictive character of such a presupposition much too easily to allow itself to be persuaded by this alone straightaway to assume a mere creature of its own thinking to be an actual being, were it not urged from another source to seek somewhere for a resting place [*Ruhestand*] in the regress from the conditioned, which is given, to the unconditioned, which in itself and as regards its mere concept is not indeed actually given, but which alone can complete the series of conditions carried out on their grounds (A583-4/B611-12).⁵⁶

Kant admits that the argument in Section Two is somewhat insufficient and that the drive to present a rationalist argument for God does not, or cannot, arise purely from within the Ideal presented by the aggravation of the disjunctive syllogism, but is also prompted by ‘another source,’ which is then immediately connected with the operation of transcendental illusion (to seek the unconditioned for every condition, i.e., premise P₁). This ‘other source’ that drives reason into the Ideal and the idea of God in search of a resting place is the Fourth Antinomy and the question of a necessary being that must underlie all contingent objects of the world. Kant pre-empted this in the Concluding Remark to the Antinomies, noting that, “the fourth antinomy presses us to venture so far as to take this step. For the existence of appearances, not grounded the least within itself but always conditioned, demands that we look around us for something different from all appearances, hence for an intelligible object, with which

criticizing all rationalist theology, which would include Spinoza as well as the accepted Leibnizian and Wolffian varieties prevalent at the time, the slippage in this confusion is perhaps not as important as if he were presenting his own assertions concerning the possibility of rationally proving the existence of God.

⁵⁶ Again, the geographical metaphor of the ‘resting place’ is examined in Chapter 4 below.

contingency would stop" (A566/B594). Kant has qualified this 'intelligible object' demanded by the Fourth Antinomy a few pages earlier as "a non-empirical condition of the entire series, i.e., an unconditionally necessary being" (A560/B588). Because this unconditioned and necessary being must be non-empirical, that is, not found or grounded in the contingency of all appearances, in order to avoid falling into the antinomy, it must come directly from pure reason itself, this is the transcendent object sought by the Ideal of Pure Reason.

God, as the object of the Ideal of Pure Reason, is constructed in accordance with this demand in terms of the *ens realissimum*. Once again, as with his jump from the sum total of all possibility to the most real being, Kant merely inserts the *ens realissimum* into the space opened by the demand of the Fourth Antinomy:

Thus among all the concepts of possible things the concept of a being having the highest reality would be best suited to the concept of an unconditionally necessary being, and even if this does not fully satisfy the concept, we still have no other choice, but see ourselves compelled to hold to it, because we must not just throw the existence of a necessary being to the winds; yet if we concede this existence, then in the entire field of possibility we cannot find anything that could make a more well-grounded claim to such a privilege in existence (A586/B614).

The most real being, the *ens realissimum*, takes the place of the unconditionally necessary being as the resting place demanded by reason. This is why, much later in the *Critique*, in the Discipline of Pure Reason, Kant characterizes the transcendental proof of the existence of God as that "which depends upon the reciprocity of the concepts of the most real being and the necessary being" (A789/B817). Michelle Grier refers to this 'insertion' of the most real being into the space opened by the need of reason to find an unconditionally necessary being as "one of the most perplexing aspects of Kant's account of the basis for proofs of God" (2006, 273). And, in a similar vein, that the necessary being "enjoys an ambiguous position in Kant's philosophy" (274). This ambiguity, it is argued in the present thesis, in fact reveals something central to Kant's critique of reason and of utmost importance to this retrieved account of the 'Kant-event.'

As Grier characterizes it, Kant's ambiguity with regard to the necessary being lies in his own accounts of it as at the same time "'indispensably necessary' as the final

ground of all things, and the ‘true abyss,’ an ‘insoluble problem for human reason’” (2006, 274).⁵⁷ What Grier sees as ambiguity, is, it is argued here, Kant’s ultimate insight into reason: that it is necessarily abyssal. The trope of reason’s attempt to leave the ground is a familiar one in the *Critique of Pure Reason*. His metaphor of the ‘wings of reason’ as a characterization of all attempted proofs of God has already been touched upon, but equally as common is that of the ground giving way. There is an example of this in Section Three of the Ideal, just after his identification of ‘other source’ that urges reason to seek a ‘resting place’ in the regress from the conditioned to unconditioned (i.e., the path of transcendental illusion). Kant writes of how,

this is the natural course taken by human reason, even the most common, although not everyone perseveres in it. It begins not with concepts, but with common experience, and thus grounds itself in something existing. But this footing [*Boden*] gives way unless it rests on the immovable rock of absolute necessity. But this itself floats without support if there is still only empty space [*leerer Raum*] outside and under it, unless it itself fills everything, so that no room [*Platz*] is left over for any further **Why?** – i.e., unless it is infinite [*unendlich*] in its reality (A584/B612).

The start of this brief account of the illegitimate progress of reason echoes Kant’s description of its “peculiar fate” in the very first paragraphs of the Preface to the A-Edition (Avii), but Kant has now seemingly made some progress in identifying the solid ground of absolute necessity as that which must also be infinite in its reality in order to prevent any further questioning of its foundations. Just because reason leads to and demands this ‘immovable rock’ not everything is as it seems. For in showing that all arguments for such absolute necessity are riddled with transcendental error brought about by the underlying illusions of reason, Kant actually shows how, to come to Grier’s ambiguity, “The unconditioned necessity, which we need so indispensably as the ultimate sustainer of all things, is for human reason the true abyss [*wahre Abgrund*].” And, as he poetically continues a few lines later, “Here everything gives

⁵⁷ Grier references Kant’s Lectures on Rational Theology, 10:1033, which reads: “The absolute necessity which we indispensably need as the final ground of all things is the true abyss for human reason.” The Critique itself contains a similar passage at A613/B641, which is addressed below. This abyss of reason from the Critique is a Critical counterpart to the empirical one that Kant identified in 1755 in his *Universal Natural History*, where in contemplating the vastness of the cosmos he observes that, “There is no end here but rather an abyss [*Abgrund*] of a true immeasurability into which all capacity of human concepts sinks even if it is raised with the help of mathematics” (1: 256).

way beneath us, and the greatest perfection as well as the smallest, hovers without support before speculative reason, for which it would cost nothing to let the one as much as the other disappear without the least obstacle” (A613/B641).⁵⁸ This ‘true abyss’ *is* the truth of reason as abyssal. With speculative reason there can be no ultimate ground or immovable rock of absolute necessity, only the abyss of empty space.⁵⁹ What was criticized as merely a ‘slippery ground’ revealed by the attempt to prove a necessary being in the *Only Possible Argument*, which in turn prompted Kant to search for solid ground and an immovable rock in the *Critique*, has now totally given way and revealed the lack of ground, the abyss [*Abgrund*] that lies beneath all striving of pure reason.⁶⁰ Kant’s statement that unconditioned necessity is the indispensable ‘true abyss’ of human reason is not as ambiguous as Grier reads it, it is assertive: reason *is* an abyss and it *is* left floating in empty space.⁶¹ It is in light of this abyssal truth of reason, the falling away of all ground, that the ‘Kant event’ as set out

⁵⁸ This abyssal outcome of the Ideal of Pure Reason and the issue of rationalist theology reveals a potential reading of Kant through the tradition of negative theology, the idea that God cannot be known and can only be set out in terms of a ‘divine darkness.’ As absurd as such a reading sounds there is some textual support for it from the very first pages of the *Critique*. In only the second paragraph of the A-Preface, Kant writes of how “reason sees itself necessitated to take refuge in principles that overstep all possible use in experience, and yet seems so unsuspecting that even ordinary common sense agrees with them. But it thereby falls into darkness [*Dunkelheit*]” (Aviii, translation modified). Similarly, in the B-Preface he writes of how he “had to deny **knowledge** in order to make room for **faith**” (Bxxx). Suggesting that faith is found only in the abyssal darkness of denied knowledge. The negative project of the Dialectic as the setting of the boundaries of knowledge from the point of view of that which has torn down those very boundary posts is in some sense Kant’s version of the *via negativa* of Pseudo-Dionysius. Both of these sections, as well as the issues of boundaries and limits, will become important in analysis of Kant’s use of spatial metaphors in Chapter Four, where such metaphors are examined in order to show how the abyss of dark and denied knowledge is essentially spatial and how space emerges as the empty heart of Kant’s thinking. For more on Kant and negative theology see Cupitt (2002).

⁵⁹ It would be reading Kant’s poetic language too literally to assume that because it is only everything ‘beneath us’ that has fallen away that the self of that ‘us’ can itself constitute some sort of absolute necessity. For as the Paralogisms (the first part of the Dialectic, which have not been discussed here, but will become important in the final Chapter of this thesis) show, the soul or self is also an illusory transcendental idea that must give way.

⁶⁰ The shift from the earlier *Only Possible Argument* essay, which presented a similar critique of the ontological argument as the *Critique* but affirmed some sort of existence, to the ‘true abyss’ of empty space, also has consequences for the early Romantic movement, which placed great emphasis on the earlier essay and the unconditioned being that it revealed. See Frank (2008). The Critical reworking of this argument presents the possibility of some sort of romanticism of the abyss.

⁶¹ Chapter 5 below, argues that it is precisely *as* empty space that something positive can be known about this abyss. See §§5.7-5.8.

by Meillassoux must be considered, as well as Kant’s own rethinking of the possibilities and uses of reason and the reconfiguration of the principle of sufficient reason.

At first glance, the critique set out in the *Ideal*, with its focus on absolute necessity, the centrality of the ontological argument, and its eventual revelation as the true abyss of human reason, seems to endorse Meillassoux’s characterization of Kant’s rejection of the principle of sufficient reason as the rejection of “*all* real necessity ... as well as the ontological argument, which is the keystone that allows the system of real necessity to close in on itself” (2008a, 33). On closer inspection, however, there are some important differences. Firstly, Kant’s conclusion—that unconditioned necessity is the true abyss of human reason—is not exactly a rejection of real necessity, rather it is an assertion that absolute necessity, like the reason that demands it, is abyssal. This is a positive claim about absolute necessity rather than a rejection of it. Secondly, the nature of reason as abyssal has been intricately elaborated by Kant throughout the *Dialectic* under the analysis of transcendental illusion and its two premises (P_1 : for any conditioned seek the unconditioned, and P_2 : if the conditioned is given then so is the unconditioned). Importantly, the identification of this illusion, and the transcendent objects it mistakenly purports to find, does not mean that it can be dismissed, abandoned or rejected.⁶² Instead, the illusory transcendental ideas of soul, world and God play an important role in Kant’s *Critical* system of reason. This leads to the third detail, that in the face of this true abyss of reason there can be a new way to use reason in accordance with both the boundaries set by justified cognition—and thus obtain the objective knowledge that Kant saves from error and illusion—and also its ineliminable, natural and unavoidable attempts to transgress those limits in search of unconditioned necessity as it dives into the abyss chasing illusions.

This third issue, of a possible *Critical* use of reason in assisting sensibility and the understanding to acquire knowledge of the world despite its abyssal urges and constant transgressions, is what Kant confronts in a strange intermediary section that follows the revelation of the abyss to him, and interjects between his examination of the

⁶² And, it is vital to remember that along with the rejection of transcendent objects Kant equally reclaims and preserves the objects of appearances as real objects.

transcendental proofs for the existence of God and the final empirical (physico-theological) one.⁶³ Here, Kant asks,

What causes it to be unavoidable to assume something among existing things to be in itself necessary; and yet at the same time to shrink back from the existence of such a being as an abyss [*Abgrunde*]? And how is one to bring reason to an understanding of itself over this matter, so that from a vacillating state of different approval it may gain one of calm insight? (A615/B643).

Despite his avowed attempt to avoid vacillation and achieve ‘calm insight,’ the image of moving towards and shrinking back is one that is particularly apt for Kant. The toing and froing of Kant’s vacillation is in fact an outcome of his lofty aims and his constant care in maintaining his Critical boundaries, as he continually edges towards definite outcomes, especially obvious with regards to claims about certainties in science in both the *Metaphysical Foundations* and the *Third Critique*, and yet he often retreats into the boundaries of cognition and the interactions of the faculties for certainty and surety. In the present case of the Transcendental Dialectic, the ‘calm’ outcome that Kant proposes in the unavoidable face of the true abyss of reason is to use his analysis of transcendental illusion and the necessity of the transcendental ideas—soul, world and God—as *regulative principles* that make it possible to consider the experience and knowledge *as if* they were unconditionally necessary things. As Kant argues initially in the *Ideal*,

The ideal of the highest being is, according to these considerations, nothing other than a **regulative principle** of reason, to regard all combination in the world **as if it** arose from an all-sufficient necessary cause, so as to ground on that cause the rule of unity that is systematic and necessary laws; but it is not an assertion of an existence that is necessary in itself (A619/B647).

Kant develops the notion of the transcendental ideas as regulative principles and the ‘as if’ structure that is central to his conception of empirical science in the lengthy Appendix to the Transcendental Dialectic (and the ‘as if’ structure is also central to his discussions of beauty and purposiveness in the *Third Critique*, which can be read as another solution to the problems of the Antinomies and a development of the

⁶³ It is also expanded upon significantly in the Appendix to the Transcendental Dialectic.

Appendix). Without attempting to elaborate all the details of the Appendix, the present examination only highlights how Kant returns to his own example of optical illusion in order to explicate these regulative principles, and how this, in a sense, completes the elaboration of transcendental illusion. Kant explains how the transcendental ideas “are never of a constitutive use” but “have an excellent and indispensably necessary regulative use” that he explains as follows:

that of directing the understanding to a certain goal respecting which the lines of direction of all its rules converge at one point, which, although it is only an idea (*focus imaginarius*) – i.e., a point from which the concepts of the understanding do not really proceed, since it lies entirely outside the bounds [*Grenzen*] of possible experience – nonetheless still serves to obtain for concepts the greatest unity alongside the greatest extension (A644/B672).

The transcendental ideas, now via the work of the Dialectic exposed as *merely* ideas and not transcendent objects, can still have an important role to play in knowledge. Indeed, it is a “necessary” role, indicating that although Kant has disposed of the unconditional necessity of God or the *ens realissimum* he nonetheless maintains some sort of necessity at work in that disposal. These ideas, as ideas, are now shown to lie outside the bounds of possible experience and thus not as a real object towards which the understanding can progress. It is here that the ‘as if’ structure comes into play, and Kant introduces this not explicitly but through the optical metaphor of the mirror and the *focus imaginarius*. The passage continues:

Now of course it is from this that there arises the deception, as if these lines of direction were shot out from an object lying outside the field [*Felde*] of possible empirical cognition (just as objects are seen behind the surface of the mirror); yet this illusion (which can be prevented from deceiving) is nevertheless indispensably necessary if besides the objects before our eyes we want to see those that lie far in the background [*im Rücken liegen*] (A644-5/B672-3).

When looking into a mirror we see not just the mirror that is in front of us, but also the reflection of objects that actually lie behind our backs [*im Rücken liegen*]. In the mirror, however, these objects are not seen from the perspective of behind us, but rather beyond the surface of the mirror, as if they are in front of us as we look towards, and into, the mirror. The *focus imaginarius* is the illusory object as it is seen in the

mirror, the one that seems to be as if it is beyond the surface of the mirror, not the real object behind us.⁶⁴ While these objects seem to be in front of us, knowledge of their illusory nature means that they can still be used to see what is behind us even if they themselves are not real, they still have a practical use. The practical use of the transcendental ideas, rather than the metaphorical objects in the mirror, was specified in the first section quoted above, they provide unity, or at least a drive towards unity, to the understanding, which in turn gives an impetus to the project of empirical science. Thus even in the dark and abyssal state in which the understanding finds itself lead by reason, there are still some points of reference, even if they are mere illusions, provided by reason, through which the understanding, now also tempered by transcendental reflection, can orient and lead itself. With this practical outcome for the empirical sciences, Kant provides the Critical solution to the problems of the pre-Critical project of bringing together philosophy and science. The place and role of reason with respect to the empirical and scientific discovery of the world is now specified in its pretensions and limitations. Reason cannot itself provide direct knowledge of objects of the world as it always leads to a place beyond the bounds of justified objective cognition, but in this striving and transgression it nonetheless provides the idea of unity and of a unified world that provides a goal for the empirical sciences to strive for, even if its achievement is impossible and illusory.

This detailed elaboration of Kant's criticism of reason has served several purposes. Firstly, it has complicated Meillassoux's argument that Kant's rejection of dogmatic metaphysics in the *Critique of Pure Reason* was premised on the rejection the principle of sufficient reason through the rejection of the ontological argument. It did this in two ways: First, by showing that Kant rejected both the principle of sufficient reason and the ontological argument in 1755 in the *New Elucidation* and yet still remained in a dogmatic mode of thought; and, second, by showing that the critique of reason and the Critical turn made in the *Critique* involved a deeper analysis of transcendental error and illusion, and this was revealed not by the ontological argument but by the Antinomies (although this had consequences for the ontological

⁶⁴ The role of the metaphor of optical illusion in the Dialectic, and Michelle Grier's discussion of it, is outlined in footnote 50, above.

argument in the Ideal of Pure Reason). In an interesting twist, this prominence of the Antinomies emphasizes the role of science and cosmological questions in Kant’s rejection of dogmatism, which is more in line with Meillassoux’s identification of the ‘Copernico-Galilean event’ as a pivotal moment in that rejection. Identifying the role of science and the centrality of the Antinomies that arise as reason attempts to address cosmological questions also reveals the continuity between Kant’s pre-Critical project and the revolutionary analysis contained in the Dialectic. Despite this continuity, there are different outcomes from each of these two lines of argumentation about the rejection of dogmatism.

This Chapter’s meticulous digression through the Antinomies, *Inaugural Dissertation* and Dialectic is important for revealing several aspects of Kant’s development and system. Firstly, the detailed structure of error and illusion shows the deeper thinking of the problems of dogmatic metaphysics and not so much the *rejection* of reason, but the necessity of its Critical reinterpretation. This is connected to, secondly, the distinction between sensibility and understanding, and eventually reason, which plays an important role in Kant’s positive system of transcendental idealism, which is not an arbitrarily decision, but rather a necessary outcome of the consideration of the Antinomies, the nature of transcendental illusion and the trap of transcendental error. The last of these—transcendental error—is also shown to be tied up with the position of transcendental realism, and thus diagnosing it and assessing its problems also provided another argument for Kant’s positive system of transcendental idealism and also a way back into the Transcendental Analytic through the insights of the Amphiboly. Drawing out this distinction between illusion and error, as an important consequence of this analysis, also shows how the issue of the justified connection between sensibility and understanding is as yet unelaborated. Finally, the way in which transcendental illusion reveals the ‘true abyss’ of rationality provides the dark context against which Kant’s positive philosophy is elaborated.

It is in the context of this ‘abyss’ of pure reason that Kant’s Critical reconfiguration of the principle of sufficient reason must be addressed. For although Kant completely destroys dogmatic metaphysics in the Dialectic, he nonetheless develops his own version of the principle of sufficient reason that does not fall prey to the illusions and errors of dogmatism. He does this in the Second Analogy of Experience in the *Critique*, part of the earlier positive sections of the work. Once again, this

reconfiguration is not a completely novel idea that emerges in the *Critique* without precedent, for the Critical reconfiguration of the principle of sufficient reason is closely connected to the criticisms of it that Kant developed in the *New Elucidation*. Only now, in the *Critique*, this criticism is pushed further to reject the dogmatic trace that remained in the earlier retention of the sufficient reason in the form of determining ground; and along with this, the two principles—succession and simultaneity—that Kant develops from his revised version of sufficient reason also become important.

As this extended criticism of the principle of sufficient reason in the form of determining ground, i.e., cause, suggests it is here that Kant's analysis and argument meet up with Hume's treatment of the problem of induction, and thus where the influence of Hume and skepticism on Kant must also be addressed. This returns to the second stage in Meillassoux's genealogy of the 'Kant event,' namely the 'Hume event' and along with this, so the second of the three elements of the 'canonical distinction' between dogmatism, skepticism and critique. The next Chapter thus turns to a close examination of the role of Hume and skepticism in the development of Kant's thought. It is in following this influence and the arguments that Kant developed in response to it, that a fuller examination of Kant's positive system of transcendental idealism takes place, with particular attention to the role that time and time-determination plays within that system.

Ultimately, in the Second Analogy, Kant resolves Hume's problem of induction by reformulating the principle of sufficient reason through the issue of time-determination. The issue of time-determination is undoubtedly a central element in Kant's philosophical system of transcendental idealism, and one that extends beyond the Second Analogy and throughout his system. It is because of this centrality that Kant's philosophy, and the philosophy that follows from Kant, has often been interpreted as one of time. It is through the recognition of this centrality of time that the parallels between Kant and Meillassoux begin to become obvious as Meillassoux's positive philosophical system advances along lines very similar to that of Kant. Meillassoux both constructs a system where time is central and also one that is developed in response to the skeptical challenge that Hume raised concerning induction and the nature of causality, thus himself following the temporal nature of Kant's philosophy, if not the precise details. However, Meillassoux's treatment of time is not itself entirely unproblematic, and, these problems manifest in the disruptive

ambiguities of space within his system. By identifying and examining both the parallels between Kant and Meillassoux's temporal responses to Hume's skeptical problem and the disruptions of space within Meillassoux positive the philosophy, the next Chapter draws together and explicates the elements necessary for the primary argument for the centrality of space within Kant's philosophy.

Chapter 3. Temporal Inheritances, Spatial Disruptions: Kant's Resolution of Hume's 'Problem' and Meillassoux's Interpretation

The previous Chapter examined Kant's destruction of dogmatism through the tools of dogmatic rationalism, revealing first the critique of the principle of sufficient reason and the ontological argument in the early *New Elucidation* and the *Only Possible Argument* essays, and then the role of the discovery of the Antinomies in prompting first the separation of sensibility and understanding in the *Inaugural Dissertation* and from there to the further distinction between understanding and reason in the *Critique* and the development of the doctrine of transcendental illusion, which ultimately leads to the 'true abyss' of human reason and the abyssal nature of absolute necessity. This analysis followed a path hinted at by Meillassoux's description of Kant's break with dogmatic metaphysics as the rejection of "all real necessity, and *a fortiori* to reject the principle of sufficient reason, as well as the ontological argument" (2008a, 33). Meillassoux, however, later in *After Finitude*, also provides another account of the rejection of dogmatism, this time ascribing the insight to Humean skepticism in the form of the 'Hume event' that awoke Kant from his dogmatic slumber (124-5, discussed above in §2.1.3 and §2.2). These two accounts of the rejection of the principle of sufficient reason correspond to the first two stages of the 'canonical distinction' between dogmatism, skepticism and Criticism that is used to structure this thesis. Thus, following the second strand and account of Kant's rejection of the principle of sufficient reason, this Chapter returns to Kant's own discussion of the influence of Hume and shows how this reveals another side to his development, which in turn will bring together all the pieces he requires for his own reconfiguration of the principle of sufficient reason in terms of time-determination and in light of the more abyssal nature of reason exposed in the *Critique*.

The present Chapter proceeds by firstly (in §3.1) going back to examine Meillassoux's characterization of what he refers to as the 'Hume-event,' which sets out the relevance of Hume to his own 'speculative materialism;' and also examine the influence of Hume on Kant, including Kant's own characterization of his relation to Hume. Using these two intertwined threads, §3.2 then examines how Kant reconfigures the principle

of sufficient reason in the *Critique of Pure Reason* in terms of time-determination and in doing so resolves Hume's problem of induction and thus confronts the place and power of skepticism. In doing so, it is argued that the issue of time-determination is, in fact, central to the system of transcendental idealism. Against this, §3.3 sets out Meillassoux's alternative reconfiguration of the principle of sufficient reason, demonstrates how this can also be considered a version of 'Critical' philosophy in the Kantian sense, and how it also operates in terms of time. Finally, §3.4 shows how Meillassoux's work runs into problems when the role of space and spatiality within his system is interrogated, especially when it is contrasted with the emphasis on time that he asserts in the earlier reconfiguration of sufficient reason and the metaphysical system he develops out of that reconfiguration. The conclusion drawn from this analysis is that the disruptive issue of space and its relation to time is one that sits uncomfortably within Meillassoux's confrontation with Kant, and this conclusion thus leads to the examination of the necessity of recognizing the centrality of space within Kant's system, which is examined and elaborated in the final two Chapters of this thesis.

§3.1. Meillassoux on 'Hume's Problem' and Kant on his 'Dogmatic Slumber' and the 'Key' to Metaphysics

In his consideration of what he calls the 'Hume event,' Meillassoux follows Kant's own identification of Hume in the *Prolegomena* as the figure who "interrupted [his] dogmatic slumber" (4: 260, Meillassoux references this section on page 124 of *After Finitude*).¹ Kant's use of this phrase—'dogmatic slumber [*dogmatischen Schlummer*]'—has already been problematized insofar as he uses it to identify the Antinomies as much as Hume, which is never recognized by Meillassoux. This equivocation can now be used to tease apart the different degrees of dogmatism at

¹ Hume's *Enquiry* was translated into German in 1755 as *Philosophische Versuche über die menschliche Erkenntniß von David Hume* (Hamburg and Leipzig, 1755), and Kant's works of the 1760s onwards already bear some of the influence of Hume (Watkins, 2005, 162). This once again suggests a gradual awakening under the influence of Hume that was worked through in various forms in the pre-Critical writings rather than a sudden break occurring with the *Critique of Pure Reason*.

work over the course of Kant's development and elucidate the actual influence of Hume and how he affected Kant's eventual thesis of transcendental idealism.

Meillassoux, in a section that has already been partially quoted, describes the 'Hume event' as,

demonstrating the fallaciousness of all metaphysical forms of rationality, which is to say, by demonstrating the fallaciousness of the absoluteness of the principle of sufficient reason—thought must renounce every form of demonstration intended to establish *a priori* that whatever gives itself as being thus and so must unconditionally be thus and so. The world's being-thus-and-so can only be discovered by way of experience, it cannot be demonstrated by absolute necessity (2008a. 125).²

Such a direct connection between Hume and the principle of sufficient reason does not seem immediately obvious, especially in the light of the analysis of the previous Chapter, which showed that Kant had rejected the dogmatic form of the principle of sufficient reason long before his encounter with Hume. Kant's own identification of the importance of Hume, and indeed the standard interpretation of the influence of Hume on Kant, concerns Hume's treatment of induction and the problem of causal connection. However, in light of the earlier discussion of the *New Elucidation* and Kant's reformulation of the principle of sufficient reason in terms of antecedently and consequentially determining grounds, the connection to Hume's problem of induction becomes clearer as the question of sufficient reason shifts from one of rationality to one of causation (the full implications of this for Kant's thinking about the principle of sufficient reason will be examined in more depth in the following section). In turn, the careful separation and distinction between reason as the ground of being and the ground of knowing, and the explication of the complicated relation between the two, will not only provide Kant with his solution Hume's problem, but also be integral in the identification of time-determination as the key to the Critical project as a whole.

² This section does call into question the need for Meillassoux to insist on a specifically Kantian inheritance, when there is little difference between what he claims to find in Hume and Kant regarding the principle of sufficient reason. Hume, of course, does not present the same negation of the ontological argument that features strongly in Meillassoux's description of Kant (although it is absent from the genealogical account of the 'Kantian catastrophe' later in *After Finitude*).

However, this is already getting too far ahead in the details of the Critical philosophy. Before they can be fully set out it is first necessary to examine the effect that Hume had on their development.

The seeming equivocation between the two awakenings from dogmatism that Kant identifies in the *Prolegomena*—Hume and the Antinomies—can be explained by the already hinted at set of distinctions in Kant’s gradual rejection of dogmatism. In the consideration of the role of the Antinomies in the *Inaugural Dissertation* in §2.3.2 above, it was shown how the Antinomies caused Kant to distinguish between an elenctic and a dogmatic use of reason. The former, the elenctic use of reason and the fallacy of subreption that it identified caused Kant to distinguish between sensibility and the understanding, a first tentative step on the path towards transcendental idealism. This preventative or refutative use of reason was the first stirrings as Kant gradually awoke from dogmatism, but the retention of the second, dogmatic use of reason in the *Dissertation* shows that he had not fully awoken, and it here with the final awakening that the influence of Hume should be considered. Thus, an examination of Hume can be used as a way to draw out the final steps of the development of transcendental idealism out of the ruinous remains of dogmatism retained in the *Dissertation*. Despite this description of this development as ‘the final steps,’ this was not in fact an easy development, and was to take Kant nearly 10 years, the so-called ‘silent decade,’ to completely work out their details.

A consideration of this final awakening from dogmatism must commence from the position in which Kant found himself in the early 1770s, immediately following the publication of the *Inaugural Dissertation* and as he began to struggle with the problems arising from that work. At this stage he already had several elements of the incipient Critical philosophy in hand. The dogmatism of the Antinomies had been overcome and partially explained by the separation of the sensibility and understanding and the identification of the subreptic fallacy (the Critical development will be the further separation of reason and the diagnosis of transcendental illusion). The examination of sensibility in terms of its *a priori* forms of time and space was already present in Section Three of the *Dissertation* and passes over largely unchanged into the Transcendental Aesthetic of the *Critique* (the major difference is that in the *Critique* Kant presents time and space in the opposite order). However, while the separation of sensibility and understanding provides a solution to the issues of the

Antinomies, it also raises another set of problems. Kant addresses these problems in the famous letter to Marcus Herz of February 21, 1772. In this letter he sets out the project that will eventually become the *Critique of Pure Reason*, which he gives the preliminary title of “*The Boundaries of Sensibility and Reason [Die Grenzen der Sinnlichkeit und der Vernunft]*” (10: 129, translation modified).³ In addition to the analysis of sensibility from the *Dissertation*, Kant now states that his investigation into the intellectual element of knowledge has already reduced to “a certain number of categories” (10: 132). In this he had already achieved, in the language of the *Critique*, the ‘metaphysical deduction of the categories’, that is, determined the structure and forms through and with which the understanding functions. However, what still requires work, and what Kant identifies as the necessary element that he was missing in his “long metaphysical studies”, is, in his own formulation, the question of “What is the ground of the relation of that in us which we call ‘representation’ to the object?” (10: 130).⁴ At this early stage the question, as Kant asks it, need not extend beyond the dogmatism of the *Dissertation* and can be understood as seeking a mechanism for how the understanding can comprehend objects as noumena without the obvious causal mechanism by which sensibility comprehends phenomena.⁵ The question that Kant actually asks here is explicit in this: “how the faculty of the understanding achieves this conformity with the things themselves is still left in a state of obscurity

³ Zweig translates *Grenzen* as ‘limits,’ although at this stage Kant had not formulated the importance of this distinction in the way that it appears in the later Critical philosophy, and thus the specificity of the translation is perhaps not as important as it will be when considering the Critical philosophy. In the translation of an earlier letter to Herz, from June 7, 1771, Zweig does translate this same preliminary title given by Kant—*Die Grenzen der Sinnlichkeit und der Vernunft*— as ‘The Bounds of Sensibility and of Reason.’ (10: 123). For more on the distinction between *Grenzen* and *Schranken* see §4.5 below.

⁴ In the essay ‘Lambert and Hume in Kant’s Development’ Lewis White Beck (1978) argues that this origin of this insight is to be found in the criticism of the *Inaugural Dissertation* raised by Lambert in his letter to Kant of October 13, 1770 (10: 103-10). This response to the *Inaugural Dissertation*, as well as that of Moses Mendelssohn on 25 December 1770 (10: 113-16), is pivotal in the development of the details of transcendental idealism in the *Critique* and especially the relationship between space and time. They are considered in more detail in §4.8 below.

⁵ The continuance of the retention of dogmatism at this time can be clearly seen in Kant’s direct assertion in the Herz letter that he “had said: The sensuous representations present things as they appear, the intellectual representations present them as they are” (10: 131).

[*Dunkelheit*]” (10: 131).⁶ With the benefit of hindsight, however, it can at least be seen how, when coupled with the deepening insights concerned with the fallacy of subreption and the problems of the Antinomies and the influence of Hume, this question will lead to the central issue of the Transcendental Deduction, and the fundamental shift that appears with the Critical philosophy, namely, how is it that concepts of the understanding can be related to sensible objects, rather than to things themselves or noumenal objects, when they themselves are not derived from those objects.⁷ It was the realization that this shift was necessary and the working out of its details, that meant that the completion of the *Critique of Pure Reason* took nine years instead of the “three months” Kant envisaged in 1772 in the letter to Herz (10: 132). It is in the context of this line of questioning and in light of what, with hindsight, can be seen as the necessity of shedding the last vestiges of dogmatism, that the influence of Hume must be considered.⁸

With the dogmatism of the *Dissertation* and the problem identified by the Herz letter in mind the account of this awakening that Kant gives in the *Prolegomena* can be read in order to determine exactly how Hume reconfigured his thought in terms that produced the Critical philosophy. Kant notes that, “*Hume* started mainly from a single

⁶ In light of the analysis of the previous Chapter and the abyssal darkness that reason strays into as it searches for a transcendent object beyond the bounds of sensibility (the sort of object that would constitute the thing in itself), this earlier statement about the obscurity or darkness [*Dunkelheit*] of the connection between the understanding and the thing in itself can now be reinterpreted as a positive statement. In the Critical philosophy, the darkness of this connection, as identified here, is not something that must dispelled, but rather the actual nature of what reason finds as it strives towards the illusory transcendental ideas. Kant’s analysis and terminology does not actually have to change all that much, only the interpretation of that darkness shifts from the negative characterization of the pre-Critical letter, to a positive characterization in the Dialectic.

⁷ Wolfgang Carl in ‘Kant’s First Drafts of the Deduction of the Categories’ (in Förster, 1989) argues that the formulation of the problem in the Herz letter is already that of the Deduction. Lewis White Beck, in a response to Carl—‘Two Way of Reading Kant’s Letter to Herz: Comments on Carl’ (also in Förster)—argues that Kant had not yet given up the dogmatism of the *Dissertation*, but it was in attempting to answer this question that this happened. In the *Critique*, of course, Kant describes the Deduction as that which “cost me the most, but I hope not unrewarded, effort” (Axvi). Regardless of the precise details, and whether Kant already had the initial insight of the argument of the Deduction or not, it can be assumed that these labours and efforts constituted at least part of the work undertaken in the ‘silent decade.’ It should also be noted that Kant to completely rewrote the Deduction for the B-Edition, these changes are examined further in Chapter 5.

⁸ This is the position presented by Beck (1978) and followed by Kuehn (1983) and Beiser (2002, 55).

but important concept in metaphysics, namely, that of the *connection of cause and effect*” (4: 257).⁹ This is the famous problem of induction, which from Hume’s skeptical position of thoroughgoing empiricism emphasizes how the mere experience of constant conjunction can never give rise to the sort of necessity required for causation. The problem that Kant is interested in, however, is not that of how cause and effect are related *per se*, but rather whether it is legitimate for reason alone to think this connection? Hume, according to Kant,

undisputedly proved that it is wholly impossible for reason to think such a connection [a causal connection between two empirical things] *a priori* from concepts, because this connection contains necessity; and it is simply not to be seen how it could be that because something is, something else must necessarily also be, and therefore how the concept of such a connection could be introduced *a priori*” (4: 257).

The issue is not so much the impossibility of thinking (causal) necessity *a priori*, but the problem encountered when the mere constant conjunction of two things is taken to be a case of such necessity. Once again, the boundary between the sensible perception of things and the conceptual understanding of *a priori* reasoning, in this case necessity, appears to have been transgressed. Reason assumes to find itself, and its own necessity, in the domain of the sensible, when there is nothing in the sensible itself to support this reasoning. As an empiricist, Hume concludes that if there is nothing in sensible experience to support the thinking of necessity and rational thought in general, then it can be dismissed as a mere fiction. This is his skeptical conclusion, which Kant was “very far from listening to ... which arose solely because he [Hume] did not completely set out his problem but only touched part of it” (4: 260). From this recognition of Hume’s important, but limited, insight into the possibility of metaphysics, Kant questioned if it could be “presented in a general manner, and ...

⁹ A similar passage is found in the Doctrine of Method in the *Critique*, it reads:

He [Hume] dwelt primarily on the principle of causality, and quite rightly remarked about that that one could not base its truth (indeed not even the objective validity of the concept of an efficient cause in general) on any insight at all, i.e., *a priori* cognition, and thus that the authority of this law is not constituted in the least by its necessity, but only by its merely general usefulness in the course of experience and a subjective necessity arising therefrom, which he called custom. Now from the incapacity of our reason to make a use of this principle that goes beyond all experience, he inferred the nullity of all pretensions of reason in general to go beyond the empirical (A760/B788).

soon found out that the concept of the connection of cause and effect is far from being the only concept through which the understanding thinks connections of things *a priori*; rather, metaphysics consists wholly of such concepts” (4: 260). This general application of the underlying issue that prompts Hume’s consideration of the specific problem of induction is the influence of Hume on Kant, but not Hume’s own original insight. Kant can avoid Hume’s skeptical conclusion as he is not committed to the empiricist impulse to explain everything in terms of sensible experience, rather he can rely upon the separate and distinct faculty of the understanding to supply *a priori* connections and concepts to the material of sensibility. The question now shifts to the relation of the understanding and sensibility, that is, the fundamental question of the Transcendental Deduction and Kant’s resulting system of transcendental idealism.

Thus, in the *Prolegomena* Kant refers to the *Critique of Pure Reason* as “the elaboration of the Humean problem in its greatest possible amplification” (4: 261). This does not, however, mean that the key to Kant’s entire system in the *Critique* can be found in the simple solution to the problem of causation raised by Hume, as it is, rather, the problem of the relation of universal and objective *a priori* reason to subjective and particular things of experience that is at issue for Kant. Hume’s analysis and problematization of causation is only a particular example of how this relation can be questioned, which is why Kant must ‘elaborate’ it in order to present it in a ‘general manner.’ Ultimately for Kant, and similarly for Hume—as Kant acknowledges (4: 258)—the actual use of causal thinking is not in question, as the concepts of cause and effect are constantly and reliably used throughout the course of both everyday life and scientific investigation. Kant’s response to Hume was not, then, to answer how is the use of causal thought possible, but rather how is its use legitimate. This is the shift, important in the Deduction and for the entire style of philosophizing of the *Critique*, from the question of *quid facti*—what concerns the fact—to *quid juris*—what is lawful (A84/B116).¹⁰

Such a reconfiguration of the question raised by the problem of induction will result in a similar shift in the answer or even the approach to or possibility of any answer; so too will the relation between Kant’s philosophy and Hume’s ‘problem’ be somewhat

¹⁰ As opposed to the unlawful and transgressive wanderings of reason beyond the bounds of cognition that are criticized in the Dialectic.

shifted. In the short piece ‘Once More unto the Breach: Kant’s Answer to Hume, Again’ Lewis White Beck notes that “It is a continuing scandal of philosophical scholarship that after nearly two centuries the question must still be debated: *What* was Kant’s answer to Hume?” (Beck, 1978, 130). Building upon this, Manfred Kuehn argues, “But it is perhaps an even greater scandal that the true extent of Hume’s ‘question’ for Kant has never been investigated satisfactorily, and that Kant’s conception of Hume’s problem has never been formulated in its entirety. For, only after it has been decided what the question for Kant was, can we hope to evaluate the answer or solution” (1983, 176).¹¹ Kuehn is critical of what he calls the ‘standard view’ of the relation between Kant and Hume, which is set out in terms of the ‘problem’ of Hume’s disproof of the principle of causality that is subsequently ‘answered’ or ‘saved’ by Kant who showed that this principle is actually one of the rational furnishings of the mind. Instead, Kuehn shows how “Hume’s problem had a distinct dialectical dimension for Kant and is, accordingly, important for the understanding of the Antinomy of Pure Reason” (177). This reveals several continuities that are often overlooked. Firstly, between the projects of Hume and Kant, who are now both shown to be examining the bounds and limitations of both sense and reason in order to legitimate the possible use of either or both for the construction of knowledge.¹² Whereas Hume “deposited his ship on the beach (of skepticism) for

¹¹ Kuehn will ultimately locate Kant’s solution to this problem in the moral philosophy of the *Critique of Practical Reason*, but more important for this investigation into the philosophical shift inaugurated by Kant is his insight that the problem is one that should be elaborated in transcendental terms and how it is through that elaboration that any solution is possible, rather than the details of that particular solution, which can only come *after* the fundamental shift required to recognize them (192).

¹² Another excellent and extended consideration of the similarities between Kant and Hume and especially the dialectical nature of Hume’s thought is Lewis White Beck’s ‘A Prussian Hume and a Scottish Kant’ (1978). See also Eric Watkins’s *Kant and the Metaphysics of Causality* (2005) for an examination of the debate about causality that avoids the “standard view” around Hume’s ‘problem’ and Kant’s ‘solution’ by presenting an historical and holistic account of Kant’s intervention in the debate (5). In Chapter 4, in particular, Watkins contrasts Hume’s event-event account of causality with Kant’s conception of the issue in terms of substances, causal powers and mutual interaction (i.e., the outcomes of the three Analogies of Experience), a model that was forged in the historical context of the debate between pre-established harmony, physical influx and occasionalism as well as the insights of Newton and the sciences (especially insofar as they tended towards the model of physical influx). This contrast, Watkins argues, is enough to show that Kant and Hume’s treatments of the problem of causality are sufficiently different—indeed, so *incompatible*—that the question of a ‘solution’ provided by Kant to the ‘problem’ raised by Hume is nonsensical. The influence of

safekeeping”—that is, he renounced the use of *a priori* reasoning without any investigation into its nature, Kant developed his Critical philosophy as a means to “navigate the ship wherever seemed good to him” (4: 262).¹³ The second continuity is that of the totality of the tools of navigation, or rather, that between the positive and negative elements of the *Critique*—the Analytic and the Dialectic as the means by which sensibility and understanding are both limited, separated and also related—which again are intertwined in their support for transcendental idealism, as argued for in the extended consideration of the Dialectic in the previous Chapter.

The result of the ‘elaborated’ and ‘general application’ of Hume’s insight thus reveals not only the impossibility of any transcendent application of *a priori* rationality, but also clarifies how this problematic position, along with the Antinomies, will be resolved in the forthcoming Critical philosophy. This is the transcendental turn as set out in §2.1.2 above, the shift to the consideration of how the understanding, or rather the *a priori* forms of thought, are legitimately used in objective experience rather than in relation to or revelation of the things in themselves. This clarifies, to a degree, the central issue of the relation between sensibility and the understanding (and eventually of reason) brought up in the Herz letter. The ‘elaborated’ version of Hume definitively shows how the dogmatic remainder that persisted through the *Inaugural Dissertation* and the Herz letter must be rejected entirely and the possibilities of reason renegotiated once again. As shown at length, Kant’s eventual renegotiation of reason in the Transcendental Dialectic is not merely a straightforward rejection but rather an investigation into the negativity of its abyssal obscurities and darknesses that manifest as the illusions and ideas of self, world and God, which thus become the regulative ideas that must be negotiated through the ‘as if’ structure. But this told us little of the positive renegotiation of reason within its legitimate boundaries, which is the project of the Transcendental Analytic and the first half of the *Critique of Pure Reason*. Instead of going directly to the heart of the matter and the Transcendental Deduction, the line of argumentation presented here follows more closely the conjunctions traced out by Meillassoux, and uses his interpretation of Kant to open up the alternative

Hume upon Kant, as is argued here, must be somewhat more subtle than a straightforward ‘solution.’

¹³ This passage in the *Prolegomena* is a perfect example of Kant’s use of geographical metaphors. Such metaphors, including this one, are examined in Chapter 4 below.

interpretation presented here, and thus examine the already-hinted-at relation between Kant's early consideration of the principle of sufficient reason in the *New Elucidation*, the problem of induction with which Hume starts his renegotiation (and eventual rejection) of reason, and the way in which these two issues come together in the *Critique*, in Kant's own final renegotiation of the principle of sufficient reason. In turn, this elaborates the details of not only the current interpretation of Kant, but also show how Meillassoux is closer to Kant than he intends. It also follows the structure, if not the chronology, of Kant's own reconfiguration of the principle of sufficient reason, which starts from the Hume's limited consideration of induction and the consequences for rationality and from there shows how the issue must be 'elaborated' to the stage where it makes up the whole of the argument in the Transcendental Deduction. Underneath this analysis of Kant's 'elaboration' of Hume's insight about the problems of causality is the recognition that Kant is not attempting to 'solve' the 'problem' that Hume set out. Rather Kant reformulates the entire nature of causality (and also in the process the principle of sufficient reason) with a new theory of causation. Consequently, it must be noted that the language of Kant's 'solution' of Hume's 'problem' is somewhat misleading, because although Kant builds on Hume's insights regarding the 'problem' of induction he does not so much 'solve' it and instead formulates the entire nature of the problem as well as his solution in a manner completely different to how Hume presented it.

§3.2. Kant's Temporal Reconfiguration of the Principle of Sufficient Reason: From the New Elucidation to the Analogies of Experience

All of the work done so far in this and the previous Chapter must now be brought together to develop a new interpretation of the project and problems that Kant deals with in the *Critique of Pure Reason*. Ultimately, the aim of this section is to show the issue of transcendental time-determination is central to Kant's Critical project and philosophy. This is done by drawing together all of the elements already identified—the two precedents acknowledged by Meillassoux (the rejection of the principle of sufficient reason and the 'elaboration' of Hume's problematization of induction) and the extended analysis of the Antinomies and the doctrine of transcendental illusion—and showing how in the *Critique* they come together in the Second Analogy of

Experience (and the Analogies in general) and reveal the importance of the issue of time-determination for the *Critique* as a whole.

Late in the *Critique*, in the Doctrine of Method, Kant connects the limitations of reason revealed by the doctrine of illusion to the issue of the principle of sufficient reason.

There, he writes of how,

The illusion of conviction, which rests on subjective causes of association and is taken for insight of natural affinity, cannot balance the misgivings to which steps risked in this way properly give rise. Hence all attempts to prove the principle of sufficient reason have also, according to the general consensus of experts, been in vain, and, since one could not abandon this principle, until the transcendental critique came onto the scene one preferred obstinately to appeal to healthy human understanding (a refuge [*Zuflucht*], which always proves that the cause of reason is in despair) rather than attempt new dogmatic proofs. (A783-784/B811-812).¹⁴

There are several important elements to this observation. Primary, is Kant's assertion that his own Critical philosophy resolves the problems of the principle of sufficient reason without either completely abandoning it or merely providing another dogmatic proof, which were the two possibilities available and attempted before Kant's intervention. These two possibilities are, of course, the dogmatism of the rationalists and the skepticism of Hume, the two stages of the 'canonical distinction' that Meillassoux supposedly avoids, but also the two contexts that he provides for the 'Kant event.' In their place, Kant's Critical philosophy both shows the problems of dogmatism in the form of transcendental illusion and also the need to reconfigure rather than abandon the principle of sufficient reason in terms of an 'elaboration' of Hume's insight into its futility. This last point is Kant's own delineation of the capacities of the understanding, which is set out by the operation of transcendental

¹⁴ In the sentence immediately preceding this section Kant provides another interesting metaphor for the illegitimate but natural propensity of reason to extend itself to the point of illusion: "Without attention to this [the synthetic *a priori* nature of experience] the proofs, like water breaking their banks [*Ufer*], run wildly across the country [*querfeldein*], wherever the tendency of hidden association may happen to lead" (A783/B811). What is important in this metaphor is the expression once again of reason transgressing boundaries, in this case the metaphorical banks [*Ufer*] of the river rather than an explicit use of either of the terms *Schranken* or *Grenzen* (limits or boundaries) that Kant uses elsewhere; but also that in doing so reason extends itself across the country or field [the *Feld* found in *querfeldin*], which recalls the battlefield of metaphysics that Kant evokes in the Preface of the *Critique*, but which is also a term that is important for the extended consideration of Kant's spatial metaphors in Chapter 4 below.

reflection described in the Amphiboly, in order to guard against the injunctions of reason to go beyond its legitimate boundaries and stray into illusion. By providing such a boundary for the understanding (and by showing how reason illegitimately transgresses this boundary) Kant saves or preserves the *a priori* instead of rejecting it along with dogmatism; and, in doing so, saves and preserves the possibility of legitimate objective knowledge. This Critical delineation is the outcome of Kant's rigorous analysis of the faculty of the understanding, and its relation to the other faculties of sensibility and reason, instead of merely appealing to 'healthy human understanding' and relying solely upon pure empiricism and custom or habit. This is the 'refuge [*Zuflucht*]' or, as he calls it elsewhere, the 'resting place [*Ruheplatz*]' (A761/B789; see §4.2 below) that Hume retreats to in his own skeptical and empirical endeavours. Such a delineation of the faculties also guards against the 'despair' of reason either in terms of its out and out rejection by the skeptics or the eventual abyss of dogmatism.¹⁵

The conjunction between Kant's Critical reconfiguration of the principle of sufficient reason and his treatment of Hume's problem of induction occurs in the Second Analogy of Experience in the *Critique of Pure Reason* (although the Third Analogy is also important).¹⁶ The Analogies of Experience are contained in a section of the *Critique* titled the Principles of Pure Understanding, which itself, along with the Schematism, is part of a section called the Analytic of Principles which comes after the work Kant has done in the Aesthetic, Logic, and Deduction (the Analytic of Concepts) and is concerned with the way in which the schematized *a priori* structures of the categories are actually applied to sensibility in experience.¹⁷ The Analogies themselves

¹⁵ These of course are the two 'deaths' of philosophy that Kant guards against at the start of the Antinomies: "the temptation [for reason] either to surrender itself to a skeptical hopelessness or else to assume an attitude of dogmatic stubbornness ... Either alternative is the death of a healthy philosophy, though the former might also be called the **euthanasia** of pure reason" (A407/B434).

¹⁶ At A201/B246, a section that will be discussed below, Kant explicitly discusses the conclusions of the Second Analogy in terms of the principle of sufficient reason. He makes a similar statement concerning the Analogies in general at A217/B265.

¹⁷ The Principles of Pure Understanding and its empirical elucidation of the categories, is similar to Kant's project of developing a metaphysics of nature in the *Metaphysical Foundations of Natural Science* (hereafter the *Metaphysical Foundations*), which appears in 1786, i.e., between the two editions of the *Critique*. The *Metaphysical Foundations* is similar in structure to the Principles of Pure Understanding, but whereas the Principles are concerned

are concerned with the category of relation, which plays out in the form of time-determination (an issue that Kant also touched upon in the Deduction and the Schematism, which are discussed in Chapter 5 below).¹⁸ Paul Guyer recognizes the importance of the Second Analogy when he notes that it “is the single argument intended both to replace the rationalists’ fallacious derivation of the principle of sufficient reason from laws of logic alone and to refute Hume’s skepticism that causal connections among distinct states of affairs can be known by human thought at all” (1987, 237). Ultimately these two aims are completed by their connection, as Béatrice Longuenesse argues: “Kant’s response to Hume on the causal principle in the Second Analogy results in his redefining *all aspects* of the notion of reason (and, therefore, of the principle of sufficient reason)” (2001, 67-68; see also 1998, 345-75 for Longuenesse’s longer analysis of the Second Analogy). This movement from the singular example of the issue of causation to the entire reconfiguration of all of reason [*Grund*] is the ‘elaboration’ of Hume that Kant speaks of in the *Prolegomena*, rather than a straightforward ‘answer’ to the ‘problem’ that Hume identified. Thus, tracing the progression of Kant’s argument of the Second Analogy, and its precursors in the *New Elucidation*, provides an excellent path into discussion of the issues of the *Critique* as a whole. It also connects neatly with Meillassoux’s characterization of the conditions within which Kant made his philosophical intervention, even if Meillassoux’s own discussion of these conditions did not itself directly bring together these two elements. In fact, Meillassoux does not examine the Analogies of Experience at all anywhere in *After Finitude*. Instead he locates Kant’s response to Hume’s problem in “the objective deduction of the categories as elaborated in the *Critique* of

with how the categories are used empirically in experience in general (and are thus transcendental), the *Metaphysical Foundations* is interested in constructing a special metaphysics of nature and thus is concerned specifically with the objects of outer sense as matter that is moveable in space; and how such matter is determined by each of the categories. In his final, unfinished work, the *Opus Postumum*, Kant was attempting to make another step beyond the *Critique* and the *Metaphysical Foundations* and transition fully to empirical natural science (for more on the relation between the *Critique* and the *Metaphysical Foundations*, including a focus on the category of relation, the Analogies and the corresponding Mechanics chapter of the *Foundations*, see Eric Watkins’s paper ‘The Argumentative Structure of Kant’s *Metaphysical Foundations of Natural Science*’ (1998)).

¹⁸ On the almost disproportionate centrality and primacy of the category of relation within the *Critique* and its development, see footnote 44 in Chapter 2 above.

Pure Reason's 'Analytic of Concepts'" (2008a, 88-89).¹⁹ Although, as is eventually argued here, the specific response to Hume in the Second Analogy (along with the reconfiguration of the principle of sufficient reason) does to a degree rest upon the work performed in the Deduction, the Deduction alone does not itself respond directly to Hume. Instead it is better thought of as the 'elaborated' treatment of the problem that Hume only partially uncovered, namely, the connection between the necessities of the understanding and the contingencies of sensibility in experience.²⁰ It is argued in §3.3 that in focusing so strongly on the Deduction, Meillassoux misses the importance of time in Kant's system of transcendental idealism, and as a result fails to see some

¹⁹ This is despite the Second Analogy, and Kant's engagement with Hume therein, being, in the words of Eric Watkins, "one of the most famous passages to be found in the history of philosophy" (2008, 4). Similarly, Paul Guyer refers to the Analogies *in toto* as, "both the historical and philosophical heart of Kant's theoretical philosophy" (1987, 207).

²⁰ The structure and aims of the various sections of the *Critique* suggest this relationship between the Analogies (and the entire Analytic of Principles), whereby they are dependent upon the work of the Deduction (and the entire Analytic of Concepts) in showing the legitimacy or authority of the application of the categories to sensibility and the Schematism, which is the mechanism that allows this application. However, the textual evidence in the *Critique* is somewhat more ambiguous. Kant commences the Analytic of Principles by making the contrast between the preceding work done in the Deduction and the intended work of the coming section, he writes:

In the previous chapter [i.e., the Deduction] we have considered the transcendental power of judgment only in accordance with the general conditions under which it alone is authorized to use pure concepts of the understanding for synthetic judgments. Now our task is to exhibit in systematic combination the judgments that the understanding actually brings about *a priori* subject to this critical warning, for which our table of the categories must doubtless give us natural and secure guidance (A148/B187).

However, while Kant contrasts the two aims of the Deduction and the Analytic of Principles he never comments on the suggested relation between them. Indeed, as Paul Guyer has observed, "Kant writes as if the deduction of the categories, let alone their schematism, had not even intervened ... as if the argument for the principles must go back to the very foundations of the deduction itself – as if it must restart the argument of the deduction – rather than just apply the conclusions already reached in the deduction and the schematism" (1987, 178). Guyer readily admits that he may be overstating this point as Kant does recognize the importance of the Deduction and its differences to the Analytic of Principles, but the fact that the Analytic provides its own argument separate from the foundations of the Deduction does mean that its arguments, and hence Kant's engagement with Hume and the principle of sufficient reason in the Second Analogy, can stand somewhat apart from the details of the Deduction and be considered in their own right. This tempers the absolute centrality of the Deduction that Meillassoux argues for and asserts the possibility, if not the necessity of engaging with the details of the Second Analogy in order to understand Kant's treatment of both the influence of Hume and the reconfiguration of the principle of sufficient reason. That said, the argument presented here reads backwards from the argument of the Analogies to reveal what was also and already discussed in the Deduction and Schematism, that is, the role of transcendental time-determination in the *Critique* (although a detailed discussion of the Deduction and Schematism, along with the earlier Aesthetic, is postponed until Chapter 5).

interesting parallels between the system that he develops and that of Kant which he intends to displace with his own.

The treatment of both the principle of sufficient reason and Hume's problem of induction in the Second Analogy returns to the connection between them that was hinted at in the previous Chapter. This connection was drawn through Kant's 1755 reconfiguration of the principle of sufficient reason in terms of antecedently and consequently determining grounds in the *New Elucidation*. Comparing the argument of the *New Elucidation*, when Kant rejected the principle of sufficient reason but remained mired in dogmatism, with the Critical solution presented in the Second Analogy thus provides a way to elucidate the full extent of Kant's Critical turn and especially the difference between his earlier dogmatic position and the 'awakening' achieved through the 'elaboration' of Hume.

As discussed briefly in §2.3.1.1, in the *New Elucidation* Kant clarified the principle of sufficient reason in terms of antecedently and consequently determining grounds, which he also refers to as the ground of becoming and the ground of knowing. He used this distinction to criticize the dogmatists' (Leibniz's and Wolff's) valorization of the principle of sufficient reason, showing how they confused and conflated these two grounds and thus illegitimately moved from knowledge to being, as in the case of the ontological argument for God. However, despite this clarification and criticism of the principle of sufficient reason Kant nonetheless remained committed to a limited version of such a principle and thus still in a dogmatic doze (as one might put it), awaiting the Antinomic and Humean alarm clocks to start ringing. Specifically, the form of sufficient reason that he dogmatically retained is the restricted version of the antecedently determining ground. He writes:

knowledge of truth is always based upon an intuition of the ground. However, when we are concerned with certainty, we very frequently rest satisfied with a consequentially determining ground. But if one takes the theorem deduced above along with the definition and considers them together, it can easily be seen that there is always an antecedently determining ground, or if you prefer, a genetic or at least an identical ground; for, of course a consequentially determining ground does not bring the truth into being; it only explains it (1: 394).

The consequentially determining ground may satisfy knowledge (and this is especially true of empirical knowledge) but it itself is only possible if what is known has itself come into being and thus has an antecedently determining ground. Thus the

consequently determining ground only supplies or presents knowledge and explanation, it is the antecedently determining ground that is the more important as it makes and determines existence itself. Kant goes on to use this restricted or clarified version of the principle of sufficient reason to present his own dogmatic argument for the existence of God as an absolutely necessary being that underlies all possibility. This is similar to the argument that he develops in the *Only Possible Argument* and which he also criticizes in the Ideal of Pure Reason and Fourth Antinomy, revealing the ‘true abyss’ of human reason and absolute necessity.

In the Third Section of the *New Elucidation* Kant develops two new “principles of metaphysical cognition” from his dogmatic re-assertion of a reduced, yet still vital, principle of sufficient reason. These two principles, and their location in Kant’s argument concerning the principle of sufficient reason, provide useful pre-cursors to his eventual treatment of causation and the principle of sufficient reason in the Analogies of Experience of the *Critique*; and are thus worthy of a brief discussion. In part, these two principles follow on from the criticisms of rationalism that he has put forward in the earlier sections, in particular they take aim at Leibniz’s doctrine of pre-established harmony, which reduces causes to internal features of monads that exist without any external relations to each other. This is most obvious in the first of these, the principle of succession, which argues in favour of a version of physical influx and proposes that “*No change can happen to substances except in so far as they are connected with other substances; their reciprocal dependency on each other determines their reciprocal changes of state*” (1: 410). To prove this Kant once again assumes the opposite (i.e., the position of the pre-established harmony of Leibniz or Wolff) and performs a *reductio*, which in this case is quite simple: given the principle of determining ground every change requires a determination, but if that determination was to be entirely internal to any substance, i.e., it was not acted upon by another substance, then it would in fact have already been in that state all along or already have been determined by that determination, and thus would not undergo any change (1: 410). And if change were eliminated then the world would remain static and time and succession would likewise disappear.²¹ Paul Guyer identifies this as an important

²¹ A longer investigation of this argument and its problems and merits can be found in Watkins (2005, 112-40).

precursor to the argument that Kant will later re-introduce into the B-Edition of the *Critique of Pure Reason* in the form of the Refutation of Idealism, which argues that “the determinate succession of representations or experiences in the mind can only be known if the mind interacts with physical bodies” (2006, 21). This betrays the central role that Guyer will attribute to the Refutation of Idealism in his close analysis of the *Critique* in *Kant and the Claims of Knowledge* (1987), an argument that is central in the assertion of the importance of space for Kant in Chapter 5 below.

The second principle that Kant develops is the principle of co-existence: this principle aims to show *how* it is possible that things can stand in a causal relation (that is, have an antecedently determining ground) to each other according to the first principle of succession. Basically, it points to the fact that to interact in a causal manner two things must co-exist together, before it is even possible that one affects the other and succession occurs. There is, however, an important qualification to this principle, as Kant’s actual argument is that such relations are not possible merely due to existence alone, but are, in fact, only possible due to divine understanding. Hence, the principle itself reads,

Finite substances do not, in virtue of their existence alone, stand in a relationship with each other, nor are they linked together by any interaction at all, except in so far as the common principle of their existence, namely the divine understanding, maintains them in a state of harmony in their reciprocal relations (1: 412-13).

The key insight here is that the sort of relationality, connection or interaction required for the causation of antecedently determining grounds according to the principle of succession cannot be found in the intrinsic properties, or mere existence, of any specific and isolated substance. Following from this, Kant argues that it must be God and the divine understanding that makes possible this connection or relation between substances.²² This argument is an elaboration of the argument for God already

²² Kant’s position is once again different from the three predominant treatments of causation at the time, pre-established harmony, physical influx and occasionalism, despite its potential similarities to all of them in various ways. Kant considers these three systems and contrasts them with his own at 1: 415 in the *New Elucidation* (for further discussion of this distinction and a more detailed account of Kant’s position in the *New Elucidation* see Watkins 2005, 155-60).

provided earlier in the *New Elucidation*; and while, as such, it is part of the dogmatic position that Kant still held in the pre-Critical writings, the issue in question here—the possibility of interaction or relation—is an important one that will persist throughout the transcendental turn and the Critical philosophy. This issue, in brief, is concerned with the unity and systematicity of the world or nature, which is necessary for the connection of the diversity and interaction of substances or entities within it and which is itself a ground that determines which relational determinations can hold between substances (and in this formulation can be seen a foreshadowing of Kant’s Critical treatment of this issue through the category of relationality). As is shown below, this principle of co-existence is a precursor of the Third Analogy of Experience in the *Critique of Pure Reason*, with this law of interaction and community, a law that is just as important to Kant’s Critical account of causality as the central Second Analogy.

Kant’s own dogmatism in the *New Elucidation*, of which his arguments for God are prime examples or outcomes, also contains the sort of tensions that he attributed to Wolff, and which will eventually prompt him to abandon dogmatism altogether. This tension emerges as Kant himself conflates truth and being. He slides from asking about knowledge of truth, which he has defined in terms of true propositions where “the predicate is posited to the exclusion of its opposite” (1:393), to the claim that there is *always* an antecedently determining ground and that it is this existence that makes truth possible. However, as Béatrice Longuenesse argues, the definition of truth that Kant provides in terms of the exclusion of the opposite predicate can in fact be proved by both the *modus ponens* of the antecedently determining ground and the *modus tollens* of the consequentially determining ground. The difference is merely that while the logic of *modus ponens* will assert the universality of the affirmative judgment of the antecedently determining ground, the logic of *modus tollens* only allows the denial of the opposite to be asserted universally, through the denial of the proposed consequentially determining ground, i.e., the affirmation of the exclusion of the opposite (2001, 71 and 84 n.10).²³

²³ Longuenesse also provides evidence from the *Reflexionen* (R3753 from the mid 1760s) that the distinction between the *modus ponens* and *modus tollens* reasoning plays a role in the distinction between the synthetic and the analytic (75, see also 1998, 352-4).

This tension eventually causes Kant to reverse and redefine the principle of sufficient reason in the *Critique*, but what prompts this is the way that the conclusions that he draws from asserting that a determining ground always exists are themselves always undermined by Humean skepticism. As discussed above, the path that Kant follows from his proof of the now restricted principle of determining ground is to prove that everything contingent has such an antecedently determining ground and that this shows that everything is *caused* and finally that the nature of a cause as preceding the caused proves the principle of succession. The problem for Kant is that Hume's skepticism and the problem of induction that he invokes works its way into the gap between the 'reality' of the antecedent and the 'logic' of the consequential determining grounds to infect reality with the space for doubt exposed by the restrictions of logic.

The growing rift and restrictions of this division are apparent in several places throughout the writings of the 1760s. In 1763's *Attempt to Introduce the Concept of Negative Magnitudes into Philosophy* (hereafter *Negative Magnitudes*) Kant develops the distinction between the real and the logical with respect to the question of opposition. Whereas in logical or mathematical opposition the consequence is nothing, in real opposition the consequence is something real. For example, walking north ten kilometers and then turning around and walking south ten kilometers results in a logical movement of zero kilometers, but a real movement of twenty kilometers. In the 'General Remark' at the end of this essay Kant extends this opposition of logic and reality to the issue of grounds in order to discuss the implications it raises for causality. He writes:

I fully understand how a consequence is posited by a ground in accordance with the rule of identity: analysis of the concepts shows that the consequence is contained in the ground ... And I can clearly understand the connection of the ground with the consequence, for the consequence is really identical with part of the concept of the ground ... But what I should dearly like to have distinctly explained to me, however, is how one thing issues from another thing, though not by means of the law of identity (2: 202).

The first kind of ground, which proceeds in accordance with the law of identity, is logical ground; while the second is the real ground and at this stage the law that determines it still remains opaque. Here Kant has moved away from the position of the *New Elucidation*: that the laws of identity and non-contradiction can account for the principle of determining ground. Now they are only ever enough to explain logical

ground and never real ground. The analytic nature of the logical is also explicitly present here as well; and soon after, in a *Reflexionen* dating from 1764-66 he observes that “One can connect concepts with one another, in order to form a larger concept from them (synthetic); or one can think of concepts as connected with one another in order to cognize what is contained in them. The concept of causes are synthetic and thus empirical” (R3749; 17: 281). As something empirical, causes as real grounds are open to the critique of Humean skepticism and the problem of induction;²⁴ but as such it is through their synthetic nature, and eventually through the nature of the synthetic *a priori*, that Kant finds the key to his path to the reconfigured principle of sufficient reason.²⁵ This is, of course, the task Kant sets himself in the *Critique of Pure Reason*.

The pre-Critical writings and the *New Elucidation* in particular, contain both the elements and the problems that will be resolved or rejected in the *Critique of Pure Reason* and its reconfiguration of the issues of causation and the principle of sufficient reason (i.e., the two elements in Meillassoux’s characterization of the ‘Kant event’). Kant’s resolution of the ‘problems’ of causation in the *Critique*, however, involves what Béatrice Longuenesse calls a “striking reversal” in the method of proof of the principle of sufficient reason (2001, 68, see also 75). Whereas in the *New Elucidation* Kant started with his new version of the principle of sufficient reason in terms of

²⁴ Despite the divergences in their theories and metaphysics of causation, Kant undoubtedly endorses some of the insights of Hume’s skepticism with regards to the ‘problem’ of induction. In the *Critique* he outlines the basic structure of Hume’s objection, writing that “the concept of cause brings the trait of necessity with it, which no experience at all can yield, for experience teaches us that one appearance customarily follows another, but not that it must necessarily follow that, nor that an inference from a condition to its consequence can be made *a priori* and entirely universally” (A112). That the ‘problem’ of causation already and unequivocally involves the issue of succession is the key insight upon which Kant’s reconfiguration in the Second Analogy will rest.

²⁵ Eric Watkins raises a similar issue when he points out that “Hume’s point is a problem for Kant only because Kant rejects pre-established harmony [as seen in principle of succession in the *New Elucidation*] in favour of physical influx” (2005, 161). Such a claim supports the two-step version of Kant’s awakening from dogmatism that was argued for above (§3.1). Kant first had to reject the Leibnizian and Wolffian dependence on the principle of sufficient reason and pre-established harmony before it was possible for the Humean ‘awakening’ to get to work, in turn, this second ‘awakening’ did not bring the issue of causation to Kant’s attention, but in fact could only work upon him because he was already calling the issue of causation into question. The fact that the issue of causation only revealed this wider problem of the need to think the connection of the synthetic *a priori* is why Kant had to ‘elaborate’ Hume’s insights and connect them back to his reconfiguration of the principle of sufficient reason [*Grund*], and by extension to all of reason [*Vernunft*] in general.

antecedent determining grounds and from there developed the principles of succession and co-existence, in the Analogies of Experience in the *Critique*, Kant commences from demonstrating that the experience of succession must be an empirical application of the category of causation, and from there provides his Critical definition of the principle of sufficient reason as “the ground of possible experience, namely the objective cognition of appearances with regard to their relation in the successive series of time” (A201/B246).²⁶ The principle of sufficient reason is now no longer that which provides either causation or succession, but rather is itself defined by the experience of succession (and in particular the necessity of antecedence required for causation to be empirically experienced) through the *a priori* application of the category of causation (the second category of relation) in objective experience. It is to this argument that we now turn.

In line with the ‘reversal’ of the arguments of the *New Elucidation* the Second Analogy starts with succession and then shows how any such successive experience requires the category of causation. The first step in the argument is thus what Longuenesse terms a ‘phenomenological’ step (2001, 77). It asserts that, “The apprehension of the manifold of appearance is always successive” (A189/B234). But, the argument runs, there is nothing in that apprehension alone that provides any necessary connection between its successive appearances. This issue of necessary connection is just as problematic in terms of considering one object viewed over time from different angles (the example that Kant gives is a house (A191/B236)) or some sort of change in the world over time (Kant’s example is a ship moving downstream (A192/B237)), note that neither of these examples are causal events and thus the succession that Kant is concerned with is more general than merely causal events. The difference between these two examples, however, shows that there is a distinction between the subjective order of perceptions and the successive states of an object. For example, as Kant points out, the house can be examined in any order, top to bottom, left to right, bottom to top, etc., whereas the sailing of a ship downstream is determined from upstream to downstream with the former preceding the latter. This distinction also shows that in terms of perception alone there can be no direct inference

²⁶ The other two categories of relation—inherence/subsistence and community/reciprocity—are applied in terms of two other modes of time: persistence and simultaneity respectively, in the First and Third Analogies.

from the entirely arbitrary subjective order of perceptions to the objective sequence of the world, and inversely, that time itself cannot be directly perceived or experienced directly, in order to determine its order and the order of occurrences within it. This last point is of great importance to Kant, he states it directly in the paragraphs added to the B-Edition—“time cannot be perceived in itself” (B233)—and more indirectly in the A-Edition, noting that basing the reality of succession on ‘empty time,’ “can be apprehended just as little as empty time [*leere Zeit*] itself” (A192/B237). He also emphasizes it again later in the argument, he writes,

this determination of position [in time] cannot be borrowed from the relation of the appearance to absolute time [*absolute Zeit*] (for that is not an object of perception), but, conversely, the appearances must determine their positions in time for each other, and make this determination in the temporal order necessary (A200/B245).

The fact is that absolute time, or time itself, cannot be directly perceived is central to the argument of not only the Second Analogy but also all of the Analogies as a whole.²⁷ In the case of the Second Analogy, the issue is the determination of order as succession. What this first ‘phenomenological step’ shows is that subjective perceptions are successive, but not in themselves determined in a necessary order (again, this is why Hume’s ‘problem’ can gain traction for Kant). It also shows that the determination of such a necessary order cannot come from either the purely subjective order, nor by relating it to absolute or empty time, instead it must somehow come from the appearances themselves (remembering that ‘appearances’ is a technical term for Kant, meaning the objects of legitimate objective cognition).

The subjective order of perception, insofar that its order is successive if not objective, does however point the way towards the necessity of objective succession. As Kant

²⁷ Kant repeats that “time cannot be perceived in itself” (A183/B226) in the First Analogy and that “one cannot perceive time itself” (B257) in the Third Analogy. This is a fundamental aspect of Kant’s theory of time, and one which he elaborates on in the Aesthetic, Paralogisms and ultimately the Refutation of Idealism. All of these treatments of time are addressed in Chapter 5 below, and especially the role that time as the form of inner sense plays in the *Critique* as something both vital and yet also problematic, which ultimately will lead to the reassertion of the at least equal importance of space in any consideration of the *Critique*. The aim at this stage is only to show how Kant’s consideration of both the principle of sufficient reason and the problem of induction lead him to the importance of time and the issue of its determination.

argues, “I must therefore derive the **subjective sequence** of apprehension from the **objective sequence** of appearances, for otherwise the former would be entirely undetermined and no appearance would be distinguished from any other” (A193/B238). For there to be any subjective sequence at all it must be distinguished from the objective sequence (and from all other possible subjective sequences), for without that objective sequence and the difference and order it supplies, there could be no differentiation of the sequence that is apprehended subjectively. As Kant continues, “The former alone [subjective sequence] proves nothing about the connection of the manifold in the object, because it is entirely arbitrary” (A193/B238). The initial phenomenological experience of a purely subjective sequence thus relies upon and raises the issue of the objective sequence of appearances, and this in turn raises the question of a necessary order. It must be noted that Kant’s argument here is not about simply differentiating a subjective order of perception from the actual order of time and how one can move from the first to the second. Instead, he is arguing that the second, the objective order of time, must be primary in order for there to be any possibility of a (potentially) different subjective order at all. This argument guards against phenomenalism, which Kant outlines as “a play of representations that would not be related to any object” (A194/B239) and thus dismissible as not part of objective experience or knowledge. In arguing that the determination of the order of time is connected up with objects (as objects of experience) Kant is once again completing the aim he set out in the Deduction, this is clear later in the Second Analogy when he writes,

Understanding belongs to all experience and its possibility, and the first thing that it does for this is not to make the representation of the objects distinct, but rather to make the representation of an object possible at all.

This is the more general question of the *Critique* as a whole: what are the conditions of possibility for objective experience and knowledge. Kant continues, showing the centrality of time to these conditions, the argument of the Analogies as a whole, and the Second Analogy in particular:

Now this happens through its conferring temporal order on the appearances and their existence by assigning to each of these, as a consequence, a place in time determined *a priori* in regard to the preceding appearances, without which it would not be part of time itself, which determines the position of all parts *a priori* (A199/B244-5).

Whether the Second Analogy alone is enough to do this, without the other determinations of persistence and simultaneity, is a different question and one which is considered after Kant's full account of time as inner sense has been set out. As it is, while it has been shown that the issue of succession comes down to the objective order of appearances, it has not yet been shown how this is related to the category of causation and thus how Kant reconfigures the principle of sufficient reason or confronts Hume's problem.

The issue of the objective order of appearances is the central point in Kant's argument about the determination of the successive order of temporal sequences. On the one level, this issue could be solved by appealing back to the earlier arguments of the Metaphysical and Transcendental Deductions in order to show how the syntheses of the imagination cannot alone determine a necessary relation and thus must appeal to the categories and in particular the category of causation. However, Kant actually also provides an argument that reasserts the conclusions of the Deductions without directly appealing to them. He first presents the premise that the necessity of the objective sequence of appearances must proceed according to a rule whereby "the apprehension of one thing (that which happens) follows that of the other (which precedes)" (A193/B238). Importantly, from the moment of that which happens it is not possible through apprehension alone to determine the preceding thing, as Kant puts it, "no appearance goes back from the following point of time to the preceding one ... on the contrary, the progress from a given time to the determinately following one is necessary" (A194/B239). This leads Kant to specify the nature of the relationship between the two times that determines them as preceding and following, he continues:

Hence, since there is still something that follows, I must necessarily relate it to something else in general that precedes, and on which it follows in accordance with a rule, i.e., necessarily, so that occurrence, as the conditioned, yields a secure indication of some condition, but it is the latter that determines the occurrence (A194/B239).

Here Kant specifies the necessary relation between precedence and following as one of the rule of relation of condition to conditioned, and it is that relation that is defined by

the category of causation.²⁸ Causation sets out the necessary relation between a cause (a condition) and an effect (a conditioned) and in this way provides the rule according to which succession can be determined. As Kant sets it out,

Thus the relation of appearances (as possible perceptions) in accordance with which the existence of that which succeeds (what happens) is determined in time necessarily and in accordance with a rule by something that precedes it, consequently the relation of cause to effect, is the condition of the objective validity of our empirical truths, and therefore of experience (A202/B247).

This is how Kant shows that the category of causation brings the necessity that makes the objective sequence of appearances and thus the succession of time possible. In turn, it is the possibility of the objective sequence of appearances that explains how any subjective sequence of apprehension, that is the phenomenological experience of the world in time, is possible. Neither of these assertions suggests that these sequences *must* be causal sequences; instead, Kant argues that experience of succession is made possible by the rule of causation that asserts that there is always a preceding and a following state of events and against that necessity can also be determined other sequences of non-causal succession through time. This more fundamental proposition about succession, however, also provides the same conditions that guarantee the possibility of causal judgments; and thus resolves the problem of induction as it is

²⁸ Eric Watkins sets out and defends this form of the argument of the Second Analogy as the ‘main argument’ of the Analogy. His focus on the importance of the relation of condition to conditioned, instead of merely the irreversibility of objective succession, aims to avoid the “*non-sequitur* of numbing grossness” in the difference between merely conceptual necessity and explicitly causal necessity that Peter Strawson finds in the Second Analogy (Watkins 2005, 203-17, see Strawson 1966, 137 for the diagnosis of the *non-sequitur*). Watkins also argues for a more modest, or ‘weak,’ outcome of the Second Analogy, that does not assert the existence or necessity of causal laws but only causation; the ‘stronger’ proof of causal laws, he argues, requires the rest of the Analogies, but mostly the Third, to also be taken into account. The importance ascribed to the relation between condition and conditioned also foreshadows the role that relation will have in transcendental illusion as reason [*Vernunft*] leads the understanding along the path of this relation in search of the unconditioned. This (illegitimate and illusory) use of reason has more in common with the dogmatic principle of sufficient reason, and would be avoided by Kant’s own reconfigured and limited principle of sufficient reason, which is concerned with determining time successively. The connection between the analysis of the Second Analogy and the role of conditions and conditioneds in the Dialectic is further emphasized when we recall that the Antinomies—the heart and origin of the Dialectic—are also concerned with the second category of relation (causality and dependence).

inherited from Hume by reconfiguring the entire structure of how such judgments are made (now synthetically rather than merely empirically).

The full extent of the ‘reversal’ of the earlier argument of the *New Elucidation* can now be seen in its entirety, and out of this reversal the reconfiguration of the principle of sufficient reason and the resolution of Hume’s problem can be set out. In the *New Elucidation*, Kant commenced from the principle of sufficient reason in terms of antecedently determining grounds as the fundamental and rationally known nature of the world (i.e., dogmatism, in the language of the later Critical philosophy). From that starting point, he developed the two principles of succession and co-existence. The shift to the Critical philosophy therefore involves rejecting the dogmatic starting point in favour of beginning with experience—the ‘phenomenological step’—and from there investigating the transcendental conditions of possibility of that experience. This is particularly evident in the Analogies, which are specifically concerned with empirical experience, and, in the case of the Second Analogy, with the experience of succession. The ‘reversal’ from the *New Elucidation* now becomes obvious as here Kant starts from the succession of experience and works back towards a redefinition of the principle of sufficient reason and the question of antecedently determining grounds, or, as he expresses it in the Second Analogy, the necessity of a preceding state. The important shift between the pre-Critical position and the Critical one is the role played by the insights gained from Hume. Kant now recognizes that the necessity required for the causation cannot come from empirical experience alone in the Humean sense (i.e., pure sensation), but must be brought to it by the separate faculty of the understanding in the form of the category of causality, which determines the relation of a condition to a conditioned and thus the precedence and trailing required for succession. In turn, the principle of sufficient reason is now defined by this determination of an objective sequence of time. As Kant puts it, “Thus the principle of sufficient reason is the ground of possible experience, namely the objective cognition of appearances with regard to their relation in the successive series of time” (A200-1/B246).²⁹ Although, as

²⁹ Kant makes a similar direct statement about the principle of sufficient reason in several *Reflexionen*: In R4680, from the early to mid 1770s, he argues that, “the principle of sufficient reason is a *principium* of the rule of experience, namely for ordering it [*solche anzustellen*]” (17: 665); and in R5202, of an indeterminate date possibly the late 1770s or late 1780s: “The *principium rationis* is the principle of the determination of things in temporal succession [*Zeitfolge*]; for that cannot be determined through time, rather time must be determined by the

Kant immediately clarifies, “The ground of proof of this proposition, however, rests solely on the following moments” (A201/B246), which means that the determination of time is not itself something that precedes the sequence in time (in the way that the *New Elucidation* placed the onus on the principle of determining grounds), rather time is determined through its succession and in a sense the judgment of cause (the reason, condition, or, the preceding) somewhat retroactively comes after the effect (the following, the conditioned) in their determination as successive events, and that determination of succession is the core of Kant’s reconfiguration of the principle of sufficient reason.

Succession and the Second Analogy may be the core of Kant’s reconfiguration, however, they alone are not, and cannot be, its entirety. As Kant qualifies in the concluding passages of the Analogies in general,

in the delusion of wanting to prove dogmatically synthetic propositions that the empirical use of the understanding recommends as its principles, a proof of the principle of sufficient reason was often sought, but always in vain. No one ever even thought of the other two analogies, though one always tacitly employed them, since the clue of the categories was missing, which alone can uncover and make noticeable every gap of the understanding, in concepts as well as in principles (A217-8/B264-5).

In this section of the *Critique*, Kant first sets out why all previous attempts to prove the principle of sufficient reason, both empiricist and dogmatic, have failed. He then asserts his own Critical philosophy as the only possible source of such a proof. The Critical philosophy can do this because, using the table of the categories and the ‘clue’ they provide, it can set out the complete (temporal) determination necessary for asserting any reason that could be termed sufficient. There is thus a unity to the three Analogies of Experience that is necessary to understand both Kant’s reconfiguration of the principle of sufficient reason and also his theory of causation or causality and in particular, how this relates to the unity of nature and its natural or causal laws.

rule of the existence of appearances in the understanding” (18: 116). Guyer discusses these *Reflexionen*, and their relation to Kant’s criticism of Leibniz, and identifies it as a precursor to the theory of time-determination, which he argues is the fundamental argument of the *Critique of Pure Reason* as a whole (1987, 37-8).

The First Analogy deals with the temporal mode of persistence (or, as Kant adds in the B-Edition, of substance), which connects to the category of inherence and subsistence. It is not necessary to spend a lot of time on this Analogy, but its fundamental insight is, in the formulation of the B-Edition, that “In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature” (B224). The persistence of substance as expressed in the First Analogy is not itself all that informative about Kant’s theory of causality, but it is, however, necessary for the temporal and causal experiences as expressed in the other two Analogies to function. As Kant writes: “Only in that which persists, therefore are temporal relations possible (for simultaneity and succession are the only relations in time), i.e., that which persists is the **substratum** of the empirical representation of time itself, by which alone all time-determination is possible” (A182/B226). Although it does not provide any information about the experience and empirical representation of time, the persistence of substance and the First Analogy does repeat and affirm an important aspect of time that was earlier put forward in the Aesthetic, namely, the unity and singularity of time. As Kant expresses it, “the unity of time, namely the identity of the substratum in which alone all change has its thoroughgoing unity” (A186/B229). And in the penultimate paragraph of the Analogy,

Substances (in appearance) are the substrata of all time-determinations. The arising of some of them and the perishing of others would itself remove the sole condition of the empirical unity of time, and the appearances would then be related to two different times, in which existence flowed side by side, which is absurd. For there is **only one** time, in which all different times must not be placed simultaneously but only one after another (A188-9/B231-2).

The First Analogy and the persistence of substance thus underpin the other two modes of time as they are elaborated in the Second and Third Analogies. The Second Analogy and the temporality of succession made possible by the application of the category of causality have already been examined. Intuitively, it is succession, or the state of being one after another, that expresses the experience of time, and indeed in this section Kant does affirm that different times are successive and not simultaneous, which prompts the question of the role of the Third Analogy and the simultaneity that it discusses.

The temporal mode of simultaneity may intuitively seem at odds with the fundamental experience of the succession of time, but it is in fact central to Kant’s elaboration of

time-determination and causation as set out in the Analogies. Indeed, Eric Watkins argues that “the Third Analogy turns out to be much more informative about Kant’s views on causality than is the Second Analogy” (2005, 218).³⁰ A hint of this importance of simultaneity can be seen in the way in which the Third Analogy is a re-expression or re-examination of the principle of co-existence from the *New Elucidation* (just as the Second Analogy related to the principle of succession). As in the earlier work, this treatment of simultaneity as co-existence—or in the language of the Analogy itself, “according to the law of interaction, or community” (B256)—must be situated in the context of the contemporary debates about causation. Once seen in this light it can be read as a confrontation with and rejection of pre-established harmony and occasionalism and an affirmation of the causal interaction between finite substances. With this in mind the sort of simultaneity in question becomes clearer, it is not a simultaneity between two different times, such as that rejected at the end of the Second Analogy, but the simultaneity of things within time. As Kant’s heading of the Analogy puts it, “All substances, insofar as they are **simultaneous** [*zugleich*], stand in thoroughgoing community (i.e., in interaction with one another)” (A211).³¹ Again, like the principle of co-existence from the *New Elucidation*, this principle underpins and makes possible causation between things, which plays out over time. For in order for one thing to be able to affect another they must both be present at the same time and capable of interaction.

The argument that Kant presents in the Third Analogy is similar in structure to the one of the Second Analogy. It commences from the phenomenological observation that experience of different things is always successive and thus alone it cannot provide evidence or a secure footing for simultaneity. Even if a sequence of perceptions is reversible or counterfactually could have been perceived in the opposite order (suggesting that its elements are simultaneous), any actual perception in a particular

³⁰ Similarly, Paul Guyer asserts that, “the third analogy is of fundamental importance for Kant’s picture of physical science” an argument that is “fundamentally Newtonian, and profoundly anti-Leibnizian” (1987, 267).

³¹ The B-Edition has an important difference to the A-Edition, which pre-empts much of the argument to come, it reads: “All substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction” (B256). Paul Guyer makes much of this engagement with space in the Third Analogy (1987, 267-76). This side of the argument is addressed in more depth in Chapter Five §5.5 below.

order itself precludes the alternative order of perception, and an attempt to reverse the order does involve an actual reversal of time back to the same starting point, but only the further succession of time.³² Equally, in the repetition of the underlying argument of all three Analogies, time itself cannot be perceived and thus simultaneity cannot be ‘read’ directly off time itself. As with the Second Analogy, because neither the sequence of apprehension nor time itself can be the source of determination, there must be a ‘rule’ that provides the ground and capability to make the determination of simultaneity. In the case of the Third Analogy, the rule is that of the third category of relation: community, and as Kant specifies, “dynamical community” (A213/B259). Kant qualifies the sense of community at work here, distinguishing between *communio* and *commercium* and specifying that it is the latter which encapsulates the relation in question here (A213/B260). The difference between the two is that while *communio* denotes membership of a common whole, *commercium*—or ‘commerce’—stipulates that there is interaction between the members of this whole, and it is precisely this mutual and reciprocal interaction that Kant requires both for the determination of simultaneity and also for his elaboration of causality. As he argues: “In addition to the mere existence there must therefore be something through which *A* determines the position of *B* in time, and conversely also something by which *B* does the same for *A*, since only under this condition can those substances be empirically represented as **existing simultaneously** [*zugleich*]” (A212/B259). As with the principle of co-existence in the *New Elucidation*, it is this mutual interaction that actually provides the possibility for the causal relations that appear in succession, for it, and the simultaneity of two things that interact, are necessary for any causation to occur at all. Furthermore, just like the *New Elucidation* this necessity of mutual and reciprocal interaction stands in opposition to pre-established harmony and occasionalism, as it asserts that substances are in constant causal relations with one another and not causally defined by either their intrinsic properties or by the influence of God. The difference from the

³² In the B-Edition the example that Kant adds is of the perception of first the moon then the earth, or vice versa, first the earth and then the moon (B257). The astronomical nature of this example of simultaneity and ultimately mutual interaction is telling given Kant’s aim is to provide a metaphysical underpinning for Newtonian mechanics. Newtonian universal gravitation is perhaps the epitome of a dynamic community and a force that acts simultaneously and immediately on all members of that community. In the A-Edition text, which is retained in the B-Edition, Kant provides the more abstract example of a sequence proceeding from A through B, C, and D, to E (A211/B258).

New Elucidation is that Kant now does not describe this connection and co-existence in terms of God, but rather as a community and ultimately as the unity of nature.³³

Kant's reconfiguration of the principle of sufficient reason and his resolution of the issue of causation, although most directly addressed in the Second Analogy, actually require that all three Analogies are considered together—that the 'clue' of the categories is followed. The initial reconfiguration of the principle of sufficient reason and problem of causation set out in the analysis of the Second Analogy showed that Kant considers these problems to actually be concerned with the ability to determine the objectivity validity of successive sequences. The Third Analogy, however, showed that the possibility of actual causal relations itself requires mutual interaction between substances that exist simultaneously, which is itself determined, determinable and guaranteed objectivity by the third category of relation, community and interdependence. This sense of substance was itself set out in the First Analogy, which determined the persistence of substance that makes any determination of changes over time possible. Through setting out the interrelation of all three Analogies, and the unity of the three modes of time that they elaborate, the complete reversal involved in the rejection of the pre-Critical dogmatism and avoidance of the problems of Humean skepticism becomes obvious. It is not a matter of thinking the connection (of causality) between two already determined events, but rather of the possibility of determining the temporality of all events and experience through the application of the three categories of relation. Thus, on the one hand, Kant sets out an alternative model of causation in terms of causal powers, grounds and substance, as opposed to the Humean event-event model.³⁴ On the other hand, in line with the 'reversal' from the earlier treatment of the

³³ This appeal to the unity of nature also is congruent with the argument presented in the Dialectic, whereby the unity of God (from the Dialectical operation of the category of community) must be 'inserted' back into the Fourth Antinomy (from the category of relation) as the most necessary being, an action that nonetheless cannot hide the abyss beneath all such actions of reason. Just as the Second Analogy is connected to the Antinomies because both are elaborations of the category of causality and dependence, so to is the Third Analogy connected to the Ideal of Pure Reason, as both elaborate the category of Community. In this way the connection and symmetry between the commerce of the Third Analogy and the thoroughgoing determination of the Ideal can be seen, as well as the result of the Ideal in the form of the unity of nature in the regulative ideas. The relation between the Third and Second Analogy as providing the full account of the relations necessary for causation is similar to the 'insertion' of the results of the Ideal back into the Fourth Antinomy.

³⁴ For more on this difference between these models of causality see Watkins, 2005, Chapter 4; and for how Kant uses his alternative account to resolve Hume's problem see Chapter 6. It is

principle of sufficient reason in the *New Elucidation*, this examination of the Analogies now also reveals the issue of time-determination as more fundamental for the possibility of objective experience than either the principle of sufficient reason or causality, both of which are themselves defined according to the possibility of time-determination.

In the Analogies, Kant thus both reconfigures the principle of sufficient reason and resolves the Humean problems of induction and causality in terms of time-determination. Time-determination, however, is also that which Kant ‘elaborates’ throughout the rest of the *Critique* in order to develop his account of the actual possibility of objective experience and knowledge in terms of the synthetic *a priori* at work in the combination of sensibility and understanding. Thus, in the introductory passages to the Analogies, Kant connects their work back to the more general issue of time-determination and the work done by the Transcendental Deduction to show the legitimacy of the application of the categories to sensibility in term of apperception and inner sense:

The general principle of all three analogies rests on the necessary **unity** of apperception with regard to all possible empirical consciousness (or perception) **at every time**, consequently, since it is an *a priori* ground, it rests upon the synthetic unity of all appearances according to their relations in time. For the original apperception is related to inner sense (the sum of all representations), and hence indeed related *a priori* to its form, i.e., the relation of the manifold of empirical consciousness in time (A177/B220).

The Analogies directly confront the problems of the principle of sufficient reason and induction in terms of time-determination, but they alone do not provide the entire story that underlies the operation and legitimacy of the possibility of time-determination and the more general issues of objective experience and knowledge. That work is provided by the arguments contained earlier in the *Critique*, in the Transcendental Aesthetic and Deduction. The importance of the issue of time-determination, for both the task of the Deduction and the project of the *Critique* as a whole, is captured in a passage from the

these sort of differences, even if they are not explicitly discussed as such or in as much detail, that underpin the ‘scandals’ that Kuehn and Beck identified in arguments that see Kant as ‘solving’ Hume’s ‘problem.’

begriming of the Deduction, one which Paul Guyer identifies as its “fundamental premise” (1987, 109). Kant asserts that,

Wherever 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, and as such all of our cognitions are in the end subjected to the formal condition of inner sense, namely time, as that in which they must all be ordered, connected, and brought into relations. This is the general remark on which one must ground everything that follows (A98-9).

The gesture towards this passage, as proof of the importance of time-determination as the ‘fundamental premise’ that underlies the *Critique* as a whole, prompts more questions than answers. Most obviously, the role of inner sense, its relation to the mind, and time as the form of inner sense have not yet been examined, nor has the answer of apperception that Kant eventually provides in the arguments of the Deduction. These are issues that are examined in more detail in Chapter 5.

Without fully confronting these questions, notions and arguments, it can at least be noted that this move back towards the more fundamental arguments of the Aesthetic and Deduction, now revealed in terms of the issue of time-determination, is the ‘amplification’ of Hume’s problem that Kant used in the *Prolegomena* to characterize the project of the *Critique of Pure Reason*. The problem of the possibility of time-determination (and the answer that Kant provides in terms of apperception, and the problematic relation of apperception to inner sense) now comes forward as the central issue of the *Critique*. As Paul Guyer asserts and argues, “the transcendental theory of experience ... is essentially a theory of time determination” (1987, 62). Recognizing the importance of time and time-*determination* returns to the insight previously highlighted in §1.5, through Strawson’s identification of Kant’s ‘genius’ in bringing the issue of time-determination to the fore. In turn, this leads back to the general aporia of time set out in §1.7 and the identification of Kant’s transcendental variation of this problem as the defining feature of his intervention in philosophy.

Thus far, the argument has not addressed these more general questions of the Deduction with its account of apperception, nor the details of the Aesthetic and the two forms of sensibility—space and time—that Kant puts forward there, or Kant’s positive arguments for his transcendental theory of experience. Instead, it has focused on the philosophical context and conditions in which his thinking arose, and the negative

argument that he presents against the dogmatism and skepticism of his times. The aim has been to pin point precisely what was the nature of the turn that Kant made in philosophy. This is done by using Meillassoux's characterization of Kant as 'catastrophic' and the account that he provides of this 'catastrophe' in terms of the rejection of dogmatism in the form of the ontological argument and the principle of sufficient reason, and the confrontation with skepticism in the form of Hume's problematization of induction and causality. In using the work of Meillassoux, the argument has not attempted to confront directly the charge of 'correlationism' that he lays against Kant. This is in line with Meillassoux's own engagement with Kant, which does not present an in-depth analysis of the actual details of Kant's arguments that supposedly support 'correlationism,' only a cursory treatment of a section of the A-Deduction in relation to Hume's problem. However, following Kant's negative arguments does lead to a fundamental insight about the issue of time-determination, which is at the center of the project of the *Critique of Pure Reason*, regardless of the acceptance or rejection of this project as 'correlationist' or otherwise. Consequently, the next Chapters provide an analysis of Kant's positive arguments, especially insofar as those arguments are concerned with time and space. Before progressing to those arguments, however, the next section shows how this revelation of Kant as a thinker of time brings up some unexpected parallels with Meillassoux's own thought, insofar as he, in his positive philosophy, is also a thinker of time. From these parallels, it is argued that because of his emphasis on time, space becomes problematic for Meillassoux. This emphasis on time and the disruption provided by space also foreshadows the coming treatment of Kant in Chapters 4 and 5 and the main argument of the thesis: that space is of central importance to Kant's philosophical system.

§3.3. Meillassoux's Temporal Reconfiguration of the Principle of Sufficient Reason: 'Hyper-Chaos'

These final sections of the Chapter investigate to the work of Quentin Meillassoux and how he also responds to (and against) the intervention that Kant made in philosophy by developing a philosophy of time. Indeed, they argue that the central arguments of *After Finitude* are all concerned with time and temporality. In light of the above analysis identifying the central issue of Kant's philosophy in terms of time-determination, this

presents an unlikely, and un-recognized, parallel between Kant and Meillassoux, one, which when coupled with his treatments of dogmatism and skepticism, places Meillassoux firmly in the tradition of philosophy that follows Kant in making time its central element or concern. With this parallel in mind it is argued that Meillassoux's treatment of time is problematic, often in ways anticipated by Kant's concern with time. It is argued that these problems arise due to a confusion between time and space and the use of the spatial metaphor to deal with time. This analysis, and a reading-back through the parallels between Kant and Meillassoux, provides the key to the central argument of this thesis, that space is of central importance to Kant's philosophy and the (sometimes confusing and confused) role and treatment of space in his thought cannot be ignored; and when it is ignored it leads to problems within such interpretations, developments and inheritances.

The positive system that Meillassoux constructs is closely tied up with his criticism of 'correlationism,' the 'catastrophic' system he aims to replace. In this entanglement there is, however, a deep parallel between the details of Kant's philosophical turn and the alternative that Meillassoux sets out. This parallel is clear in the complete final line of *After Finitude*, which was only partially quoted above. The line reads: "If Hume's problem woke Kant from his dogmatic slumber, we can only hope that that problem of ancestry succeeds in waking us from our correlationist slumber, by enjoining us to reconcile thought and absolute" (128). This summary of the fundamental argument of *After Finitude*, not only repeats what has been shown in §3.2 to be the somewhat problematic interpretation of Kant's development that ascribes a central role to Hume's problem in Kant's emergence from dogmatism. It also intimately draws together Meillassoux's positive project—the reconciliation of thought and absolute—with his criticism of 'correlationism.' Furthermore, it identifies the means through which this criticism and following reconciliation takes place, through what he calls the problem of 'ancestrality,' that is, of the existence of the world anterior to the existence of human subjects. The issue of time and temporality can be seen in both sides of this summary, even more so with the previous analysis of Kant's response to Hume in terms of time-determination in mind. The analysis of Meillassoux's positive philosophical system presented here is structured around these two temporal elements, starting with the problem of 'ancestrality' and how Meillassoux uses it to challenge the Kantian 'correlationist' position and develop his own in response; and then by looking

at how this is related to Hume's problem, both as a point where Meillassoux criticizes Kant's 'solution' and where he reinforces his own position with his own "speculative resolution" to Hume and Kant on the issue of induction and causation (2008a, 128). The argument then progresses by demonstrating that insofar as Meillassoux's positive philosophical system arises out of the destruction of dogmatism and the challenge of Humean skepticism, and results in a reconfiguration of the principle of sufficient reason through reason itself, it in many ways can be considered 'Critical' in a way broadly along the lines of Kant's Critical project, at least in form is not in content. Through investigating Meillassoux's system with both this parallel and the explicitly temporal reading of Kant's own reconfiguration in mind, it is shown how Meillassoux's reconfiguration is also founded in time and temporality, thus extending the parallel between Kant and Meillassoux to the level of content as well as form.

§3.3.1. Time in Meillassoux I: 'Ancestrality' and the Critique of 'Correlationism'

As elaborated in §2.1 above, Meillassoux's criticism of Kant and all philosophy that follows from Kant is that it is characterized by the binding together of the subject and object, of thought and world, in some form of what he calls 'correlationism.' He coins this neologism in order to avoid being drawn into specific debates about realism and idealism as they have played out over the history of philosophy. Indeed, he even goes so far as to state that by using this term he "wanted to avoid the usual 'parade' of transcendental philosophy and phenomenology against the accusation of idealism— ... answers such as: 'Kantian criticism is not a subjective idealism since there is a refutation of idealism in the *Critique of Pure Reason*'" (2007, 408). However, despite this attempted sidestep, his criticism of 'correlationism' nonetheless turns out to be a criticism of idealism, as he uses "the problem of ancestrality" (2008a, 128) to show that when confronted with this issue "every variety of correlationism is exposed as an extreme idealism" (2008a, 18).³⁵

³⁵ Equally, the explicit aim of this evasion, to avoid engaging with the Refutation of Idealism found in the *Critique*, is also a weak point in Meillassoux's method, and identifies a particularly important point of comparison with Kant, as is developed in Chapter 5 below

The problem of ‘ancestrality’ is introduced in *After Finitude* with a list of geological and cosmological events ranging from “the date of the origin of the universe (13.5 billion years ago)” to “the date of the origin of humankind (*Homo habilis*, 2 million years ago)” (9). Importantly for Meillassoux, these ‘ancestral’ events, determined by empirical science from material evidence (what Meillassoux calls the ‘ache-fossil’), are anterior to the advent of humanity and thus to all human consciousness (this is the fundamental definition of the ‘ancestral’, that it is anterior to all human consciousness or subjectivity). That is, they are “*anterior to every form of human relation to the world*” (10). Meillassoux is not interested in appraising “the reliability of the techniques employed in order to formulate such statements,” but rather in asking “*how is correlationism liable to interpret these ancestral statements?*” (10).³⁶ The challenge that the mere knowledge of these events raises is the question of how the ‘correlationist,’ who prioritized precisely the relation to the world above the existence of the world alone, can account for the actuality of these events in any meaningful way? The wager that Meillassoux puts forward is that the only possible coherent understanding of the statements of the ‘arche-fossil,’ and the existence of the ‘ancestral,’ can be found in taking their meaning in a realist sense, and that on the outcome of this wager rests the proper test of the validity of ‘correlationism’ as a tenable philosophical position. As he puts it: “This is what we shall express in terms of the ancestral statement’s *irremediable* realism: either this statement has a realist sense, and *only* a realist sense, or it has no sense at all” (2008a, 17). The unsaid implication here, that Meillassoux has spelt out immediately before making this statement, is that any sense of the ‘ancestral statement’ that is not realist, i.e., the ‘correlationist’ sense, is in fact nonsense, and in particular, the sort of nonsense that is called ‘idealism.’

In order to attempt to deal with ‘ancestrality’ the ‘correlationist’ must, in Meillassoux’s view, locate the meaning of the evidence of the ‘arche-fossil’ in the present and not in the past, as it is only in the present that there can be a relation between the object of the ‘arche-fossil’ and human subjectivity. This, for Meillassoux,

where the often-ignored yet central role of space in Kant’s thought is elaborated through the argument of the Refutation of Idealism. This prompts the confrontation and parallel between Meillassoux and Kant on the issue of idealism and realism to be re-thought through the issues of space and time.

³⁶ Presumably, this also means that he is not interested in the epistemological issues of how it is possible that these events are known.

leads to a counter intuitive claim that the meaning of the ‘fossil’ comes not from its existence in the past, but must be retrojected from the present, which has implication for the sort of temporality at work in claims about ‘ancestrality.’ Meillassoux writes that for the ‘correlationist’: “To understand the fossil, it is necessary to proceed from the present to the past, following a logical order, rather than from the past to the present following a chronological order” (2008a, 16). Immediately this resonates with Kant’s reconfiguration of the Second Analogy, which emphasized the following moment in the movement of temporal succession, although for Kant it is precisely the nature of time-determination that is in question, while for Meillassoux there is an assumption that time is simply chronology. This assumption and the neglect of the sort of questioning of time-determination that Kant provides, ultimately becomes problematic for Meillassoux despite his criticisms of Kant. The substitution of a retrojective logic for a chronological progression, Meillassoux argues, raises problems for ‘correlationists’ when they are asked about the actual meaning of the ‘truth’ of the ‘ancestral statement,’ i.e., what actually happened 13.5 billion years ago when the universe formed, what was it that formed, what were the objects in question and how can this have any meaning?

Asking this question reveals the ‘nonsense’ about ‘ancestral statements’ that the ‘correlationist’ must end up supporting. Meillassoux sets it out as:

the ancestral statement is a true statement, in that it is objective, but one whose referent cannot possible have actually existed in the way this truth describes it. It is a true statement but what it describes as real is an impossible event, it is an ‘objective’ statement, but it has no conceivable object (2008a, 16-17).

The full extent of the ‘nonsense’ of ‘objectivity without objects’ comes in pointing out that without the objects of the ‘arche-fossils’ examined by empirical scientists in the present the objective truth of ‘ancestral statements’ would never be determined in the first place. That is, unless the ‘objects’ of the ‘arche-fossil’ are taken not as actual in the sense that empirical science want to talk about them, but rather as ideal objects themselves defined by the ‘objectivity’ of their correlation to the subject. In this way, when confronted with the ‘arche-fossil’ and the ‘ancestral statements’ that it entails, the only recourse that the ‘correlationist’ has is to be forced to reveal themselves as having been a subjective idealist all along. As Meillassoux writes: “Confronted with

the arche-fossil ... every variety of correlationism is exposed as extreme idealism” (2008a, 18). The trouble with ‘correlationism’ is not the focus on the correlation itself, but rather that behind this focus hides the philosophical black hole of idealism. This result, and resulting critique of ‘correlationism,’ is at odds with Meillassoux’s stated aim to investigate ‘correlationism’ instead of idealism as an attempt to sidestep debates about realism and idealism in Kantian and phenomenological philosophy. If the real problem of ‘correlationism’ is that it is really a hidden idealism, then the way in which those philosophies charged with ‘correlationism’ deal with the problem of idealism must surely be investigated?³⁷

Meillassoux does consider two potential ‘correlationist’ rejoinders to the challenge of ‘ancestrality.’ The first rejoinder that Meillassoux presents is built around using Husserl’s notion of adumbrations to explain the non-given nature of the ‘ancestral.’ This operates as if the problem of the ‘arche-fossil’ were just another example of a common objection against idealism, namely, that many things are not perceived or thought directly by a human subject constantly and yet they still exist, for example, an object or action that takes place in a room devoid of people, or in a remote part of the earth, or even on a planet of the other side of the universe. The ‘correlationist’ response that deals with this is the recognition that the non-perception of ‘ancestral’ events is no different from the lacuna in perception caused by the inability to see the floor beneath the table, or the clothes in the cupboard, which if they cannot be apprehended directly must be accounted for through a process similar to Husserl’s ‘givenness-by-adumbrations.’ Where lacunae in direct perception are filled in by an indirect possibility of perception and the recognition that “the sensible apprehension of an object always occurs against the backdrop of the un-apprehended, whether it be with regard to the object’s spatiality or temporality” (Meillassoux 2008a, 19).³⁸

³⁷ Adrian Johnston astutely observes that in this argument Meillassoux does not actually directly criticize either ‘correlationism’ in general or Kant in particular, but rather “He merely tries to force non-absolutist correlationists (such as Kantian transcendental idealists and various stripes of phenomenologists) to choose between realism (such as that of anti-correlational speculative materialism) and absolute idealism (which, ... is presumed without argument to be *prima facie* untenable in its ridiculous absurdity)” (98). As Johnston makes clear, this forced choice does not even include a critique of the idealism is so vehemently opposes, but only an assumption of its absurdity and thus untenability.

³⁸ Although it must be noted that for Husserl adumbrations are explicitly only ever temporal and never spatial (see Philipse, 313 n.67, and also Husserl’s *Ideas I* §41).

However, the mutual interchangeability between space and time in this response also points to how Meillassoux will reject it. For, as has already been discussed, Meillassoux finds in the problem of the ‘arche-fossil’ a fundamental asymmetry between space and time due to the nature of the latter. Here, in his response to this ‘correlationist’ rejoinder to ‘ancestrality,’ Meillassoux draws out the special status of time, now revealed through the notion of ‘ancestrality.’ He writes, “The entire nature of this rejoinder consists in conflating two distinct notions: that of the *ancestral*, and that of the (spatially) *distant* or (temporally) *ancient*” (20). The rejoinder put forward by the ‘correlationist’ makes the mistake of equating spatial and temporal distance (ancientness) and ignoring the special status of the ‘ancestral,’ assuming that it is only another case of temporal distance. While the non-perception of the distant can be easily accounted for by the postulation of their potential perception, this is not the case with the ‘ancestral,’ as by its very nature it is not just distant in time but in fact anterior to all possible perception (20).

The ‘ancestral’ is not only anterior to all possible givenness, it also reveals that givenness itself came into being at some point, and that there existed a time before givenness as a time *without* givenness. This in turn reveals that temporality itself cannot be connected with givenness, that is, as Meillassoux puts it, it reveals “*a time which, by definition, cannot be reduced to any givenness which preceded it and whose emergence it allows*”. Ultimately he claims that this must be “not the time of consciousness but the time of science” (21). This point, hidden here in a response to an objection, is one that becomes important again later in *After Finitude* when Meillassoux explicitly addresses the ‘dia-chronicity’ of science. At this point, however, it is mentioned and set aside as he moves on to what he sees as a more incisive ‘correlationist’ rejoinder to the problem of ‘ancestrality.’ He (and this analysis of him) returns to this idea of the ‘time of science’ presently.

The second, stronger ‘correlationist’ rejoinder to the problem of ‘ancestrality’ that Meillassoux presents, builds upon the limitations of the first rejoinder and the insights into the proper problem of the temporality of ‘ancestrality’ that they revealed. The central move it makes is to suggest that the problem now identified—how to account for the emergence of givenness in the ‘time of science’ that exists before all consciousness—can be resolved by carefully distinguishing its empirical and transcendental elements and avoiding confusion between the two. The key difference

is that while the empirical question is concerned with the actual events and objects of the ‘ancestral,’ the transcendental question is of how knowledge of those events and objects is possible. This distinction addresses the problem of ‘ancestrality’ by suggesting that the issue of the transcendental conditions of knowledge are not some *thing* that must emerge in time, but rather themselves something that determine the possibility thinking temporally. To ask how these conditions emerged is to treat them like a thing that is already located in time or emerged within time, that is, as something already subject to the determinations of temporality made possible by those very transcendental conditions, at which point the paradox of this demand of the ‘ancestral’ is made clear (22).³⁹ In the terms that Kant made this distinction, as discussed above in §2.1.2, the only way that the empirical knowledge about the reality of the things known is guaranteed is by recognizing that the conditions of the possibility of that knowledge—the transcendental conditions—are ideal, and not *something* real that exist in themselves in the world or must emerge in time. If that were the case the rift between knowledge and its objects would be too great and thus could never be guaranteed.

Meillassoux concedes that this distinction aims to sidestep the question of the emergence of the transcendental conditions of experience, as they are not something that exists in time in the same way as empirical things. He names this objection “a classic defense of Kantian idealism” (24). His own answer to this rejoinder will consist of arguing that even if these transcendental conditions, what Meillassoux will call merely ‘the transcendental,’ are not themselves the same as empirical objects they are

³⁹ Meillassoux notes that this rejoinder accuses the ‘time of science’ of being “amphibolous” in its confusion of the transcendental and empirical (23), thus evoking without specifically citing the Appendix to the Transcendental Analytic in the Critique of Pure Reason, which is titled ‘On the amphiboly of the concepts of reflection through the confusion of the empirical use of the understanding with the transcendental.’ Ostensibly, the Amphiboly is concerned with transcendental reflection, the means through which judgments are ascribed to the correct faculty and the mis-ascription or confusion of transcendental and empirical judgments is guarded against. It is curious that Meillassoux does not engage directly with Kant’s arguments in the Amphiboly as they address the problem of idealism (the ‘idealism’ that Kant ascribes to Leibniz in particular, see §2.3.2 above for a discussion of the Amphiboly and the idealism of ‘intellectualized appearances’ that Kant attributes to Leibniz) and the connection between substance and its relations in time and space. While the former set of relations is obviously important for Meillassoux and the issues of ‘ancestrality,’ the latter set of spatial relations and the amphibolous sense of ‘outer’ in both its transcendental and empirical senses is possibly even more important in engaging with the issues that Meillassoux brings up.

nonetheless reliant on the body as a “‘retro-transcendental’ condition for the subject of knowledge” (25). Thus, while Meillassoux accepts the distinction between the transcendental and the empirical levels of knowledge, he argues, via the introduction of the third, mediating condition of embodiment and bodies, which certainly do appear in time, that ‘the transcendental,’ now once again in the form of an embodied transcendental subject, must also answer the question of its emergence in time (25). Thus ‘the transcendental’ itself is also susceptible to the problematization prompted by ‘ancestrality’ and the ‘dia-chronicity’ of the time of science. As Meillassoux phrases it: “the time of science temporalizes and spatializes the emergence of living bodies; that is to say, *the emergence of the conditions for the taking place of the transcendental*” (25). But this, as even the very term ‘the transcendental’ in its use of the definite article suggests, is a contradictory position for transcendental philosophy as, so goes Meillassoux’s argument, it forces a confrontation a space-time that cannot be conceived of from within any transcendental structure of space-time as it concerns the coming to be of that structure itself. For Meillassoux this demonstrates the ‘inadequacy’ of ‘the transcendental’ in its ability to contend with the challenge of the ‘arche-fossil,’ which in turn points towards the line that he will take to resolve this issue (26).

In expanding the full force of the challenge of ‘ancestrality’ by engaging with these (hypothetical) rejoinders, Meillassoux brings out the actual core of that challenge: that the realist ‘sense’ of the ‘arche-fossil’ can only be explained in terms of the ‘time of science.’ In Chapter 5 of *After Finitude* Meillassoux connects this with the insights of the ‘Copernico-Galilean event’ that, in his genealogy, constitutes the first and misinterpreted step in the development of ‘correlationism.’ He argues:

Closer inspection reveals that the problem of the arche-fossil is not confined to ancestral statements. For it concerns every discourse whose meaning includes a *temporal discrepancy* between thinking and being—thus, not only statements about events occurring prior to the emergence of humans, but also statements about possible events that are *ulterior* to the extinction of the human species (112).

It is the ability to formulate such statements that concern events anterior or ulterior to *every* human relation to the world that Meillassoux sees as the nature of empirical science. He names the operation of this temporal discrepancy ‘dia-chronicity,’ and this

ruptures the necessary synchronicity between thinking and being that is characteristic of ‘correlationism.’ This reveals the proper importance of the example of the ‘arche-fossil,’ it is not important that there actually was something there anterior to humanity, but merely that any such statement is meaningful. That is, it does not reduce to the ‘nonsense’ that Meillassoux ascribes to ‘correlationism,’ i.e., the reduction of chronology to logic (2008a, 16). It is not that empirical science provides knowledge of any specific other time that is ‘dia-chronic’ to humanity, but that makes the very thought of such times as ‘dia-chronic’ meaningful, and as such it make the very thought of chronology in general meaningful. From here Meillassoux turns to the impact of the ‘Copernico-Galilean event’ and the way in which it formalizes the disconnection between thinking and world and the ability of science to think the world as it is without thought through the mathematization of nature. This notion of the real world, which can be thought through mathematics—as the world as it is independent of thought— returns later in the analysis of Meillassoux in §3.3.2.

The vitally important point that must be emphasized at this stage, is how the challenge of ‘ancestrality’ not only is one raised by time, but also reveals the preeminence of time within Meillassoux’s system.⁴⁰ The challenge of ‘ancestrality’ and along with it the vital insight of the ‘Copernico-Galilean event’ and its scientific revelation of reality, is essentially concerned with the issue of ‘dia-chronicity’ and chronology. Thus, the first step in the development of Meillassoux’s system is concerned with time, and with a very particular mode of time, the chronological flow of time that already, if the objection of ‘ancestrality’ is to have any meaning, must itself be different from and indifferent to the human perception and understanding of the world. The second stage of the developments of Meillassoux argument is now addressed: This is where he puts forward his own philosophical system in place of that of Kant—his supposed sidestepping of the third element ‘canonical distinction,’ i.e., the Critical philosophy—and his response to the destruction of dogmatic thought brought about by the insights of science.

⁴⁰ Graham Harman, with reference to this same section concerning temporal discrepancy, explicitly describes this emphasis on time as a “preference for time over space” contrasting the temporal disjunction of the ‘ancestral’ with the spatial disjunction of distant galaxies or suchlike (2011, 38). The precise relation and distinction between time and space in Meillassoux is analyzed and problematized in section §3.4.

§3.3.2. Time in Meillassoux II: The ‘Principle of Unreason,’ ‘Hyper-Chaos’ and Hume’s Problem

Meillassoux uses his particular formulation of ‘ancestrality’ to problematize ‘correlationism,’ but the connection that he makes between ‘dia-chronicity’ and the ‘Copernico-Galilean event’ is, in a way, more important. This is because it is by going back to that event—which in his thought becomes more original than, and indeed original to Kant’s turn—that he begins to develop his alternative system that avoids the ‘canonical distinction’ of dogmatism, skepticism and critique. On his account it is science that actually reveals the inability of purely rationalist thought to fully comprehend the world as it is, although this was not an insight that science recognized, or necessarily cared about, and was thus one that was only thought in philosophy through first Hume and then Kant. In the previous Chapter and the first sections of this one, it is argued that Meillassoux’s own position passed through some of the elements of dogmatism and skepticism that he supposedly bypasses, and it is here, in the development of his own system, that he endorses the necessity of inheriting the rejection of dogmatism from Kant, and the importance of Hume’s insight into the futility of the principle of sufficient reason. Of the two it is the latter that is most important for Meillassoux’s argument, and which is now discussed, and compared with Kant’s engagement with Hume described in §§3.1-3.2 above.

Meillassoux’s summary is that the ‘Hume event’ progresses by, “demonstrating the fallaciousness of all metaphysical forms of rationality, which is to say, by demonstrating the fallaciousness of the absoluteness of the principle of sufficient reason” (2008a, 125). The reason that metaphysical rationality fails is, in his account, because of the facticity of either empirical experience (in Hume) or the transcendental forms of thought (in Kant, as discussed in §2.1.2). Facticity, in Meillassoux’s summary “disqualifies idealist as well as realist dogmatism,” defeating both Cartesian rationalism and Berkeleyan idealism, the two positions that thought cannot simply return to (52). The ‘correlationist’ response to this disqualification of the absoluteness of the world is to emphasize the correlation and the fact of what is given through that correlation—the ‘for us’ of all knowledge. Meillassoux’s alternative response and reclamation of an absolute, in light of his criticism of ‘correlationism,’ is to recognize

that “*it is not the correlation but the facticity of the correlation that constitutes the absolute.*” Instead of accentuating that the correlation prevents any access to the absolute and only the facticity of experience (or the structures that make possible that experience) as a limit of thought that prevents any knowledge beyond that thought, Meillassoux aims to show “why thought ... experiences rather its *knowledge* of the absolute through facticity” (52). Such knowledge of the absolute is the reconciliation of thought and absolute that is the aim of all the argumentation in *After Finitude*. The way that Meillassoux argues for it is by combining his injunction to absolutize the facticity (60) of the correlation with the (Humean) rejection of the principle of sufficient reason, which was the proof of facticity itself. The outcome of this will be a reformulation of the principle of sufficient reason altogether, one which now no longer leads back into dogmatic rationalism, or into Kantian transcendental idealism, but into Meillassoux’s own philosophical system.

With his aim to reconfigure the principle of sufficient reason Meillassoux comes very close to the line of argumentation that Kant put forward in all of his work since the *New Elucidation* and completes in the Second Analogy. Following this parallel, Meillassoux’s response to the rejection of the principle of sufficient reason can, like Kant’s, also be traced along the distinction of antecedent and consequential determining grounds made in the *New Elucidation*. In that early work Kant rejected the latter form and dogmatically retained the principle of sufficient reason only as antecedently determining grounds, however he then ran into the problems encountered by all dogmatism when attempting to elaborate how this was known—a problem that he recognized in Hume’s treatment of induction and causality. Thus, in his Critical reconfiguration of the principle of sufficient reason, Kant used the equivocation between the ground of being and ground of knowing as a reason to change the nature of cognition itself so that it can encompass both. Meillassoux performs a similar extension across the equivocation but in the opposite direction, locating the proper source of the inability to think necessity not in terms of the ground of knowing but instead in the ground of being. As he puts it:

we are going to put back into the thing itself what we [i.e., Kant] mistakenly took to be an incapacity in thought. In other words, instead of construing the absence of reason inherent in everything as a limit that thought encounters in its search for ultimate reason, we must understand that this absence of reason *is*, and can *only* be the *ultimate* property of the entity (2008a, 53).

For Meillassoux the inability of reason to comprehend the world is due to the fact that the world itself is not governed by rationality. This is the lesson to be taken from the Humean and Kantian destruction of rationalist metaphysics; and this is also how Meillassoux finds a path back to the absolute, now in the form of absolute unreason, which is his reconfiguration of the principle of sufficient reason. He argues that

We are no longer upholding a variant of the principle of sufficient reason, according to which there is a necessary reason why everything is the way it is rather than otherwise, but rather the absolute truth of a *principle of unreason*. There is no reason for anything to be or remain the way it is; everything must, without reason, be able to be and/or be able to be other than it is (60).

The ‘principle of unreason’ is Meillassoux’s reconfiguration of the principle of sufficient reason, it is, for him, the only properly rational outcome of reason’s realization of its own limitations. It also, and this importantly reinforces his self-affirmed rationalism, allows Meillassoux to declare that he has reclaimed an absolute after the supposed rejection of the possibility of rationality proving the existence of any absolute, which was the result of Kant’s critique of reason. As he admits (and affirms) later in the book, this reconfiguration of the meaning of the rejection of the principle of sufficient reason is a form of “intellectual intuition” (82), which Kant had proscribed in his limitation on thinking, but which Meillassoux, through his reversal salvages from that proscription. The difference from the intellectual intuition of dogmatism is that the absolute truth of ‘unreason’ is not a proof of an absolute entity such as that which dogmatism attempts to prove, but rather of the truth of the ground of being itself. This is borne out by the nature of this absolute ‘unreason’ itself, which negates the possibility of any necessary entity at all by making all entities contingent. This is an important element of Meillassoux’s argument, that this absolute is “an absolute that would not be an absolute entity” (60). As it is not a demonstration of some *thing* that exists this absolute avoids the sort of metaphysical problems generated by dogmatism, but is nonetheless an insight into the absolute nature of the world in itself.

Meillassoux coins the term “factiality [*factualité*]” to describe this “speculative essence of facticity” and uses this term to replace the negatively-tinged ‘principle of

unreason' with the "principle of factuality" (79). This nominal replacement does not, however, hide the fact that this principle is actually a reconfigured principle of sufficient reason, or, as Meillassoux puts it, "a reason emancipated from the principle of sufficient reason – a *speculative form of the rational* that would no longer be a *metaphysical reason*" (77). Here Meillassoux is once again very close to Kant. Since his 'principle of unreason/factuality' is a reconfiguration of the principle of sufficient reason that takes place through the dismissal of reason by reason itself. Although Meillassoux terms his reconfiguration 'speculative' it is also very close to what Kant terms 'Critical' in the role that it plays within the argument, even if it also aims to perform the sort of 'speculative' work that Kant dismisses in the Dialectic (hence its name). Neither of these nominal shifts, nor the parallel to Kant, reveals what precisely is the outcome of this rationally reconfigured 'principle of factuality,' and it is precisely in elaborating these outcomes that Meillassoux, once again paralleling Kant, turns to time.

Meillassoux's reformulation of the principle of sufficient reason is based on his insight that its insufficiency is due to the lack of reason in the world, not merely in our capacity to know the world. This recognition of the 'unreason' of the world is a development of the 'correlationist' argument that asserts that the world itself cannot be known, only the facticity of the given. Instead of accepting this facticity as a limitation of thought Meillassoux argues that, "We must convert facticity into the real property whereby everything and every world *is* without reason, and is thereby *capable of actually becoming otherwise without reason*" (53). This formulation reveals the extent of the reversal between Meillassoux's rethinking of the principle of sufficient reason and that of Kant in the *New Elucidation*. While Kant rejected the ground of knowing to assert the certainty of the ground of becoming, Meillassoux does the exact opposite, rejecting the certainty of the ground of becoming to assert the certainty of knowing (that rejection). As he puts it, "the failure of the principle of reason [as becoming, i.e., as cause] follows, quite simply, from [its] *falsity*." This falsity is a certainly known fact of the world, which is why Meillassoux states that 'unreason' is "an absolute ontological property." He goes on to begin to describe the world as it is in light of this ontological insight:

there is no reason for anything to be or to remain thus and so rather than otherwise, and this applies as much to laws that govern the world as to things of the world. Everything could actually collapse: from trees to stars, from stars to laws, from physical laws to logical laws; and this not by virtue of some superior law whereby everything is destined to perish, but by virtue of the absence of any superior law capable of preserving anything, no matter what, from perishing (53).

If this characterization of the world without reason seems hyperbolic, then a few pages later Meillassoux provides an even more poetic description:

If we look through the aperture which we have opened up onto the absolute, what we see there is a rather menacing power – something insensible, and capable of destroying both things and worlds, of bringing forth monstrous absurdities, yet also of never doing anything, or realizing every dream, but also every nightmare, of engendering random and frenetic transformations, or conversely, of producing a universe that remains motionless down to its ultimate recess, like a cloud bearing the fiercest storms, then the brightest spells, if only for an interval of disquieting calm (64).

He terms this menacing power ‘hyper-chaos’ and although it seems like it is completely different to the sort of absolute required for realism it is in fact the sort of reality that Meillassoux endorses. It does, however, in this poetic formulation remain hard to envisage what this insight into reality actually entails. Meillassoux continues, providing an account that is at once both more concrete and more abstract. He writes:

We see something akin to Time, but a Time that is inconceivable for physics, since it is capable of destroying, without cause or reason, every physical law, just as it is inconceivable for metaphysics, since it is capable of destroying every determinable entity, even a god, even God ... It is a Time capable of destroying even becoming itself by bringing forth, perhaps forever, fixity stasis and death (64).

Although here Meillassoux is somewhat circumspect, describing ‘hyper-chaos’ as only ‘akin’ to time, elsewhere he is more certain on this equation, writing: “Unreason becomes the attribute of an absolute time able to destroy and create any determined entity” (2007, 431), and “The answer is *time*—facticity as absolute must be considered as time, *but a very special time*, that I called in *After Finitude* ‘hyper-chaos’” (2008b, 10). ‘Hyper-chaos’ must be time itself, because as an absolute it must be eternal and yet ‘hyper-chaos’ negates the possibility of any eternal entity including itself as an entity, further to this, even if it is to negate itself, its disappearance must also take place in time, proving the eternality and thus absoluteness of temporality (2008a, 62).

This identification of ‘hyper-chaos’ as time is at once more concrete as time is something that is readily understood and its destructive power or ability to change things is intuitively grasped; however, it is also somewhat more abstract as it is hard to equate this absolute and eternal reality of chaotic time with the reality experienced everyday and examined and explained by science; as Meillassoux says, it is “inconceivable” for physics. This seeming disjunction between the empirical and straightforward time of science and the time of ‘hyper-chaos’ is examined in more detail in §3.4 below, when what is problematic in Meillassoux’s arguments is discussed. Before that the discussion continues thinking through the constellation of ideas that structures this Chapter and address the way in which Meillassoux’s temporal reconfiguration of the principle of sufficient reason is related to Hume and the problem of induction in a way that is similar, if opposed, to that of Kant as set out in §3.2 above.

In Chapter 4 of *After Finitude*, Meillassoux recognizes and addresses how Hume’s discussion of induction and causality is pertinent to his reformulation of the principle of sufficient reason in terms of ‘factiality’ and the discovery of the absolute of temporal ‘hyper-chaos.’⁴¹ Meillassoux frames his engagement with Hume in the form of a potential objection to the contingency of the laws of nature entailed by ‘hyper-chaos.’ The objection is that if the world is indeed radically contingent as ‘hyper-chaos,’ then this chaos would destroy the stable, law governed world as it is experienced and known. As Meillassoux formulates the objection: “we cannot give up the idea of such a necessity [of the laws of nature] on the grounds of its enigmatic character *without also giving up the manifest stability of our world*” and, as he continues a few lines later, “the *fact* of the *stability* of the laws of nature seems sufficient to refute the very idea their possible contingency – unless we attribute this stability to a quite extraordinary degree of coincidence” (84). Without this stability, the objection concludes, “objects could *actually and for no reason whatsoever* behave in the most erratic fashion” (85). Meillassoux identifies this objection explicitly as “Hume’s problem” and puts forward his own response to it, his reconciliation of ‘hyper-chaos’ and the manifest stability of the world, as “*a speculative solution to*

⁴¹ He also discusses this conjunction in a very similar way but with a slightly different aim in the recent *Science Fiction and Extro-Science Fiction* (2015).

Hume's problem" (85). In presenting his solution, Meillassoux also directly engages with Kant's treatment of this same issue and once again criticizes Kant, extending and deepening his more general critique of the Kantian 'catastrophe.' This is thus a useful argument in comparing Meillassoux's interpretation of Kant with the one developed above in §3.2 and showing the difference (and again unexpected similarities) between Kant's path and the alternative one set out by Meillassoux.

Hume's problem concerns the possibility of thinking the necessity of cause and effect. While this challenge is mainly concerned with the relation or disjunction between the thinking of pure reason and empirical experience, i.e., how the sort of necessity demanded by causality cannot be determined purely from empirical experience, there is also a more general version of this problem, which is what Meillassoux will draw on for his own answer to Hume's problematization of any possible thinking of necessary causality. As Meillassoux constructs it, this version is concerned with the question of whether, or how, "is it possible to demonstrate that the same effects will follow from the same causes *ceteris paribus*" (2008a, 85). Most treatments of this problem, such as Kant's, are concerned with the proving or demonstrating of the necessity of cause and effect rather than the 'truth' or actuality of it. Just as he confronts many other philosophical problems by rejecting all of their previously attempted 'solutions,' Meillassoux once again dismisses such standard interpretations in favour of his own.

Meillassoux sets out three attempted solutions to Hume's problem that have already been put forward by philosophy. Firstly, a metaphysical solution that attempted to prove a supreme principle that governs the world and guarantees its uniformity (87). It was precisely this sort of dogmatic solution that Hume set his skepticism against. The second solution was the one that Hume put in the place of the disproven dogmatism of metaphysics, the skeptical abandonment of the problem and reliance on habit in the place of proof. The third solution was the transcendental one put forward by Kant, which Meillassoux locates in "the objective deduction of the categories as elaborated in the *Critique of Pure Reason's* 'Analytic of Concepts'" (88-9).⁴² As argued above, this interpretation of Kant is severely limited and problematic as it ignores Kant's

⁴² Meillassoux repeats this misattribution of Kant's response to Hume to the Deduction in *Science Fiction and Extro-Science Fiction* on page 43. Again, in this work he does not address the Second Analogy in considering Kant's response to Hume.

treatment of both the principle of sufficient reason and Hume's problem of induction in the Second Analogy. With that earlier interpretation in mind, Meillassoux's interpretation of Kant's response can now be examined in order to draw out the differences between the two.

According to Meillassoux, Kant's response to Hume is not to offer a direct account of why causality is necessary, but rather to present an "indirect and conditional proof" that operates through a *reductio ad absurdum* (89). The *reductio* proceeds, in Meillassoux's analysis, by first asking what would happen if there was no causal necessity and examining what this would entail. Kant's answer, again according to Meillassoux, is that this would constitute "the complete destruction of every form of representation, for the resulting disorder among phenomena would be such as to preclude the lasting subsistence of any sort of objectivity and even of any sort of consciousness" (89). The important element of this interpretation is the idea that Kant states that without causal necessity, whatever that might be, experience would become so disordered and random that there would be no way that it could be considered objective, or that the consciousness of the subject could recognize itself at all. At this point Meillassoux does not offer any textual evidence from Kant, but he does supply some later in *After Finitude* where he refers to a passage from the A-Deduction that he takes to be proof of Kant's hypothesis that the contingency of laws, i.e., the lack of causality, would lead to "the necessity of their frequent modification" (106). It is such frequent and chaotic modification that would, in Meillassoux's interpretation of Kant, make experience impossible. The section from the *Critique* reads:

Unity of synthesis in accordance empirical concepts would be entirely contingent [*zufällig*], and, were it not grounded on a transcendental ground of unity, it would be possible for a swarm of appearances to fill up our soul without experience ever being able to arise from it. But in that case all relation of cognition to objects also disappear, since the appearances would lack connection in accordance with universal and necessary laws, and would thus be intuition without thought, but never cognition, and would therefore be as good as nothing for us (A111).⁴³

⁴³ Meillassoux, of course, originally quotes this in French but references only the *Akademie Ausgabe* and not any specific French translation of the *Critique* (Meillassoux 2006, 146). Brassier's English translation of *After Finitude* references the 1929 Kemp Smith translation of the *Critique* but notes that the translation has been modified—Kemp Smith translates *zufällig* as 'accidental' and Brassier changes it to 'contingent' (in the French it is *contingente*). For the

And Meillassoux's interpretation of this passage reads:

Kant infers from the assumption of the actual contingency of phenomenal laws modifications of reality so extreme that they would necessarily entail the destruction of the very possibility of knowledge, and even of consciousness (106).

Meillassoux finds in the Kant section evidence that Kant is talking about 'extreme modifications of reality' that make experience impossible, but upon closer inspection of Kant's argument it can be asserted that there is no evidence in this particular section for that interpretation. In this alternate interpretation of the Kant section there is no evidence that he is referring to any 'modifications of reality,' rather he speaks of a 'swarm of appearances' but this swarm could refer to a set of consistent and regular set of intuitions, only without the transcendental ground of unity and the application of the category of causality, *any* set of appearances would be a swarm—even *consistent and regular ones*. Kant does not need to infer the frequent modification of reality to produce such a swarm, *all* unsynthesized and unschematized intuition is a swarm that does not yet constitute cognition.

This section of the *Critique* may not support Meillassoux's interpretation of Kant in terms of a *reductio*, but Meillassoux does, in a footnote, reference another passage of the *Critique*. This reference is still from the A-Deduction and is a section where Kant is arguing that appearances must be subject to a rule. The lines Meillassoux quotes read:

If cinnabar were now red, now black, now light, now heavy, if a human being were now changed into this animal shape, now into that one, if on the longest day the land were covered now with fruits, now with ice and snow, then my empirical imagination would never even get the opportunity to think of heavy cinnabar on occasion of representation of the color red (A100-1, quoted in Meillassoux 2008a, 136n13).

sake of consistency what is presented here is the quoted section as it appears in the Guyer and Wood translation of the *Critique*.

Again, Meillassoux interprets this as if Kant were hypothetically postulating the absence of rules in nature, and indeed this quote reads as if Kant is discussing the frequent modulation of natural things (cinnabar, human beings, days of the year) separate and prior to any experience of them. However, Kant is very specifically talking about appearances and not things in themselves, a distinction he brings up a couple of lines later, reminding us that, “appearances are not things in themselves, but rather the mere play of our representations, which in the end come down to determinations of the inner sense” (A101). Two things are evident from this elaboration of Kant’s example of the frequent modulation of cinnabar et al. Firstly, a reminder of the all important distinction between appearances and things in themselves, which is at the heart of Kant’s transcendental system. The discussion here is one again about appearances, and in fact pure intuition before it is synthesized into cognition—a distinction that will be elaborated upon in Chapter 5—which means that it is not yet an issue of nature as an object of experience. Secondly, and more importantly, what is really at issue here is the question of time-determination and its relation to inner sense, which as the above (§3.2) discussion of Kant’s treatment of Hume in the Analogies showed is both the question that Kant reconfigures the principle of sufficient reason around, and also the fundamental issue of the *Critique* as a whole.⁴⁴ Even though his own arguments are very close to Kant’s own affirmations concerning the importance of the issue of time-determination and his own emphasis on time in the form of ‘hyper-chaos,’ Meillassoux does not raise this issue as it occurs in the *Critique*, just as he does not address the Analogies where the three modes of time are connected back to Kant’s explicit reformulation of the principle of sufficient reason and his discussion of Hume’s problem.

Despite these problems with Meillassoux’s interpretation of Kant the temporal nature of the problems nonetheless returns to Kant’s temporal re-solution of Hume’s problem, which, it is argued, is similar to Meillassoux’s solution via his own form of time, ‘hyper-chaos.’ This also returns to the discussion of Meillassoux’s own ‘speculative solution’ to Hume’s problem. Meillassoux rejects the three solutions that he set out

⁴⁴ In fact this section of the A-Deduction, which is concerned with “synthesis of reproduction in imagination” (A100), touches on what is the central core of the three syntheses that Kant sets out in the Deduction. The details of these syntheses, along with the entire argument of the Deduction, are examined in Chapter 5 below.

(dogmatic, skeptical and Critical), and all for a similar reason, that none of them actually “ever calls into question *the truth of the causal necessity*” (90); which, of course, is precisely what his ‘principle of factuality’ and the doctrine of ‘hyper-chaos’ does do. As such, Meillassoux comes closest to Hume’s conclusion concerning his own problem, but without either succumbing to skepticism or resorting to habit. Rather, he takes Hume’s insight as direct *a priori* knowledge—intellectual intuition—into the actual nature of the world. This reciprocally reconfigures the question that any ‘solution’ to Hume’s problem must answer. The question now becomes: why do the senses reveal a world where consistency and necessity hold when intellection of reality reveals one of chaos? Common sense would suggest that the reality of ‘hyper-chaos,’ which is capable of destroying or creating things for any reason at all, would not produce the consistent world that is experienced everyday. This is the argument that Meillassoux attributed to Kant in the Deduction. Against this Meillassoux argues that such a ‘common sense’ or reductive expectation in fact arises from a flawed conception of probability and correcting this flaw will reveal something important about the nature of reality and knowledge and experience.

He argues, through the use of Cantor’s transfinite numbers, that it is impossible to limit the set of chaotic possibilities out of which the actual world arises, and as such, without the possibility of the totalization of the set from which probabilities are determined, probabilistic reasoning cannot be applied to these possibilities (2008a, 103). Essentially, in the untotalizable domain of ‘hyper-chaos,’ there is no more reason, or even probability, for things to be inconsistent than consistent. Thus, the regular world that is experienced and examined by science is perfectly consistent with the contingency of ‘hyper-chaos’ (92).⁴⁵ It is through his operationalization of the transfinite that Meillassoux finds a way to avoid what he takes to be Kant’s assertion of the necessity of consistency in the Transcendental Deduction. In its place he establishes what he sees as the correct interpretation of necessity: the necessity of contingency. This necessity is what Meillassoux describes as ‘real necessity,’ and this matches up with his earlier claim that reality is ultimately what is mathematical, but now, the mathematics in question are distinguished as those of the transfinite (107).

⁴⁵ Meillassoux reiterates this argument in ‘Potentiality and Virtuality’ (in Bryant et al, 2011, 224-236).

Ultimately, in the ‘speculative solution’ to Hume’s problem through the mobilization of the mathematics of the transfinite, Meillassoux claims to “penetrate more deeply into the nature of a temporality delivered from real necessity” (101). This temporality is, of course, that of ‘hyper-chaos.’

The parallels between Meillassoux and Kant now are revealed in further detail. Both of their arguments are motivated by the rejection of dogmatic metaphysics and especially the principle of sufficient reason, both of them use Hume’s challenge to induction and causality as a prompt for how to reconfigure the principle of sufficient reason, and both perform that reconfiguration by using reason against its own dogmatic pretensions. Similarly, and this is the most important point of comparison, both Kant’s and Meillassoux’s reconfigured principles of sufficient reason operate through an insight into the nature of time and its connection to what Meillassoux explicitly calls ‘real necessity.’ Kant does not use this formulation, but the argument that the necessity required for causal judgments must come from the categories shows that he is working with the ‘reality’ of his own limited conception of necessity; and furthermore, the Dialectic exposed ‘absolute necessity’ as the ‘true abyss’ of human reason (a position that is curiously close to the abyss of ‘unreason’ exposed by Meillassoux). The time that Meillassoux reveals is that of ‘hyper-chaos,’ while the time that Kant revels is the more-conventional and nuanced three modes of persistence, succession and co-existence (simultaneity), determined by the application of the three categories of relation. Despite these parallels there are, as is to be expected given Meillassoux’s antipathy towards Kant, significant differences in these theories of time. However, the aim here is not merely to determine if one is correct and the other wrong, but rather to open up a new interpretation of Kant through the subtleties and details revealed by Meillassoux’s engagement and the issues that arise from that engagement. Therefore, the next section examines some issues with Meillassoux’s system and argues that they can be used as a clue to bring to light parallel issues in Kant.

§3.4. Problems for Meillassoux: Spatial Disruptions

The parallel between Kant’s and Meillassoux’s temporal reconfigurations of the principle of sufficient reason brings to light just how entrenched the centrality of

temporality is in both Kant and the philosophies that follow from Kant. If even a critic as vehement as Meillassoux has such strong affinities with Kant in terms of temporality then the influence and importance of time must extend beyond its specific and limited place within Kant's system. Highlighting this parallel does, however, also present an opportunity for opening up an alternative interpretation of Kant and the influences that he bequeaths to philosophy. This is, of course, the argument that asserts the centrality of space within Kant's system, which disrupts the priority of time that has often been associated with his thought. The first steps, or at least the clues that point towards this spatial interpretation of Kant are now presented. They argue that despite his emphasis on time, within Meillassoux's philosophy there is an abiding and disruptive spatial presence. By virtue of the parallels between Meillassoux and Kant, this at least suggests the possibility of a similar presence in Kant. This is the possibility that the rest of the thesis will expand on.

Although the aim of this section is to show how Meillassoux's temporal philosophy is disrupted or problematized by space, either in the form of the spatial metaphor or the concept of space itself, the argument presented progresses by examining some criticisms of Meillassoux presented by Adrian Johnston and Peter Hallward. As well as a defense of the Meillassouxian position by Nathan Brown and some further investigations and criticisms by Martin Hägglund, which finally reveals a fundamental tension in Meillassoux's treatments of time; finally, this tension itself is explained by the disruptive manifestations of space within Meillassoux's system. The criticisms presented by Johnston and Hallward focus on what Johnston describes as Meillassoux's "problematic relationship to the empirical sciences" (107) and how "Meillassoux's appeals to science don't constitute a deep and defensible materialist philosophical engagement with properly scientific handlings of physical reality" (95). Such criticisms are deeply problematic for Meillassoux, as he presents his project as a reclaiming of the proper insights of the scientific revolution of the 'Copernico-Galilean event.' Meillassoux's engagement with science, and the scientific conceptions and treatments of reality, can be approached in two ways: firstly, from the side of Meillassoux's system of 'speculative materialism' and 'hyper-chaos,' which as a metaphysics has implications for the possibilities of scientific work and findings; and secondly, from the side of the empirical sciences themselves and how they consider

reality and their approach to it and the implications that these details have for Meillassoux's arguments.

In the first case the problems with Meillassoux's position develops when it is asked how the logical results of his arguments, i.e., the 'principle of factuality' and the reality of 'hyper-chaos,' relate to the sort of scientific practices and discourses that prompted his arguments, i.e., those of the 'Copernico-Galilean event,' and in particular the role of mathematics in those practices and their history. There are at least two important issues that arise from this consideration. The first addresses how the 'principle of factuality' relates to the progression of scientific discovery of the world. If anything can change for no reason at all, including all the laws of physics or suchlike, then there can be no distinction between a supposed progression of the scientific understanding of the world—e.g., the shift from Newtonian physics to post-Newtonian—and a radical change in the world itself. This even applies at the smaller level of the discoveries of an individual scientist, where any errors such a failed experiments or the inability to reproduce results by other scientists, can be simply dismissed as the result of chaotic changes in the world, rather than a insufficiency of past or present knowledge. While Meillassoux explains the constancy of the world via the 'real necessity' of contingency as transfinite and untotalizable, and thus in theory dismiss such worries about the outcomes of the 'principle of factuality' for scientific method. This solution, however, does not actually add anything to the project or method of scientific discovery or discourse, as Adrian Johnston argues:

for reasonable scientific practitioners, Ockham's razor always would slice away from Meillassoux's hyper-Chaos [... as it] either makes no difference whatsoever (i.e., self-respecting scientists ignore it for a number of very good theoretical and practical reasons) or licenses past scientific mistakes and/or present bad science being sophistically conjured away by cheap-and-easy appeals to hyper-Chaos (101).

In these terms, the philosophical assertion of 'hyper-chaos' is not only unnecessary to the scientific project as whole but also potentially harmful to its practice. There is another, second way in which the theoretical assertion of the reality of 'hyper-chaos' is problematic insofar as it relates to scientific progression and practice. For just as the 'principle of factuality' and its 'real necessity' of contingency is in some ways irrelevant for scientific practice, then the reverse—the irrelevance of scientific practice

for establishing the theoretical and mathematical truth of ‘factuality’—is also to some degree true, or at least presents a problematic question. Johnston succinctly sets out his issue thus,

If, as Meillassoux wants to maintain through his resuscitation of the distinction between primary and secondary qualities, mathematics immediately manifests real material beings as they are in and of themselves, then one is obliged to explain, which Meillassoux doesn’t, why Galileo and Newton, among others, weren’t already and automatically in firm possession centuries ago of the unvarnished truth about objective physical reality (reasonably assuming, from a post-Newtonian perspective, that they weren’t) (101).

This question highlights the role that mathematics plays in Meillassoux’s conception of the reality of ‘hyper-chaos’ and asks why does the mathematical mode of science, which is the core of his description of the ‘Copernico-Galilean event’ that pre-dated the ‘Kant event,’ does not necessarily reveal its own truth about reality in its previous scientific uses? This furthers the first point beyond the question of how changes in the mathematical scientific conception of the world take place, to ask how such errors are even possible within this ‘correct’ way of understanding reality. The consequence of underscoring these tensions between the logical and theoretical system of ‘speculative materialism’ and the actual progression and mistakes of the empirical sciences is the deepening of the difference between the two and how they operate within Meillassoux’s arguments.

The distinction and tension between the theoretical dimension of ‘hyper-chaos’ and the progression and methods of the empirical sciences is made all the more palpable when it is approached from the other side, in particular in the form of Meillassoux’s explicit usages of the empirical sciences, primarily in the form of the ‘arche-fossil.’ The ‘arche-fossil’ is, of course, the starting point of Meillassoux’s argument against ‘correlationism,’ and it is out of this argument and the ‘dia-chronicity’ of the ‘time of science’ that it reveals that he develops the entire system of ‘speculative materialism’ through the necessary absolutization of the factuality of the correlation. As such, the ‘arche-fossil,’ which uncritically is taken from the empirical sciences,⁴⁶ is integral to

⁴⁶ Despite the fact that the sciences of geology and plate tectonics, which both describe distinct features of the external world and are most pertinent to the events described as ‘ancestral,’ are significantly less mathematically formalized than those of physics, which nonetheless

Meillassoux's arguments. The use of the scientific evidence of the 'arche-fossil' is an example of how Meillassoux, in Johnston's analysis,

cherry-picks from the empirical realms of the experiential (seizing upon Hume's problem of induction) and the experimental (extracting the arche-fossil from certain physical sciences and also dabbling in speculations superimposed upon biology) (102).

Such 'cherry-picking' is especially obvious when compared to the way in which certain particularities of the empirical sciences are dismissed by appealing to the theoretical domain of 'hyper-chaos,' which is postulated purely by reason and thus impervious to the criticisms of a merely empirical nature. One example is the shift from, and difference between, Newtonian and post-Newtonian physics. But the problems associated with Meillassoux's 'cherry-picking' from the empirical science are found most clearly in the tensions within his use of the 'arche-fossil' itself; and, as such, returns the argument to the issue of the problematic notions of time within Meillassoux's arguments.

Peter Hallward identifies the problems that emerge from Meillassoux's use of scientific claims concerning the 'arche-fossil,' when he touches upon the issue of determination involved in the actual chronology of 'ancestrality.' He writes:

The idea that the meaning of the statement 'the universe was formed 13.5 billion years ago' might be independent of the mind that thinks it only makes sense if you disregard the quaintly parochial unit of measurement involved (along with the meaning of words like 'ago,' to say nothing of the meaning of meaning tout court) (140).

This criticism does not even require the elaboration of the second theoretical strand of time explicitly as 'hyper-chaos;' it is enough merely to evoke the independence of the world as heterogeneous to the mind that determines time, and question how this world relates to the mind-determined units of measurement. Hallward pushes the idea that the full independence of the 'ancestral' and the entailment that this requires ignoring the units of measurement and speculates that under Meillassoux's logic, "What might then

postulates the existence of entities such as quarks, which are not immediately obvious as features of the real external world.

be known of an ‘arche-fossil’ (i.e. a thing considered independently of whatever is given of it, including its material extension) would presumably have to be expressed in terms of pure numbers alone, rather than dates or measurements” (140). This, at least, is consistent with Meillassoux’s aspiration towards a completely mathematized science of reality; but once again, from the point of view of this purely logical mathematical reality, the empirical conception of the ‘ancestral’ as “13.5 billion years ago” is meaningless and along with it much of scientific discourse the material world it aims to investigate. The underlying tension at work here is between what Johnston identifies as “on the one hand, the physical-applied-empirical-ontic, and, on the other hand, the metaphysical-pure-logical-ontological” (110). Explicating this distinction through the specific empirical example of the ‘arche-fossil,’ which Meillassoux in his ‘cherry-picking’ attempts to somehow use in both registers, shows how the central locus of the tension involved in this distinction is the issue of time.

This tension is between the two forms of time that he uses in *After Finitude*, the ‘diachronicity’ of ‘ancestrality’ and the ‘real necessity’ of ‘hyper-chaos,’ which are examined above in §§ 3.3.1 and 3.3.2 respectively. Peter Gratton highlights this tension when he notes that in Meillassoux’s system there is, “a heterogeneous relation between the eternal (‘time without becoming’) and the chronological (that which the eternal can always interrupt via the creation *ex nihilo* of matter, life, thought, and perhaps a world of justice)” (2013, 88, see also 2014, Chapter 2 & Conclusion). At issue here is actually the problem that Kant is grappling with in the *Critique*, that of time-determination. For the tension between these two modes of time is the question of how can the ‘real necessity’ of ‘hyper-chaos’ be determined in such a way that the chronology of the ‘ancestral’ makes sense? This question is problematic because of the heterogeneity and thus incompatibility between the two notions of time.⁴⁷ While the

⁴⁷ The heterogeneity between these two forms of time in Meillassoux constitutes something like an antinomy somewhat similar to the First Antinomy between the temporal and spatial boundaries of the world that Kant identifies in the Transcendental Dialectic (see §2.3.2 above). ‘Hyper-chaos’ would be the rationalist thesis of this antinomy and chronology the empiricist antithesis. According to the dialectical argument outlined in the Antinomies, the arguments of both sides of this antinomy would be legitimate in themselves, but illegitimate insofar as they appeal to transcendental realism and the fallacy of subreption and postulate some transcendent entity. Such an argument is not pursued here, instead, just as Kant sees the antinomy of pure reason as a “beneficial error” that helps him “search for the key to escape this labyrinth [of pure reason]” (5: 107), so to will the problems of the relation between time and space and the

‘chronology’ of the empirical sciences and the ‘ancestral realm’ that they discover entails the common sense concept of the linear progression of time from past to present to future, the temporality of ‘hyper-chaos’ is more complicated, being described as either “eternal” (Gratton) or as an “instant” (Johnston, 97 & Hallward, 122); although as a singular unchanging and unchangeable point any instant is also eternal. In either case, of the ‘eternality’ or ‘instantaneousness’ of ‘hyper-chaos,’ the two modes of time are incompatible as ‘hyper-chaos’ cannot allow or determine chronology. Meillassoux criticizes the ‘correlationists’ for replacing chronology with logic, but he makes exactly the same sort of argument when in his ‘speculative solution’ he uses reason and ‘real necessity’ to argue for the ‘hyper-chaotic’ and eternal (or instantaneous) nature of time. Even if the flux of ‘hyper-chaos’ can produce the consistency that Meillassoux deduces through transfinite numbers, then the eternal nature of ‘hyper-chaos,’ the very feature that lead him to put forwards its absolute nature, precludes it from being determined in any sense like that necessary for chronology.

These criticisms certainly show how the distinction between the two forms of time present in the logical-metaphysical notion of ‘hyper-chaos’ and the empirical-physical notion of chronology are incompatible, but as such they do not reveal the full extent of the tension in Meillassoux’s position. This is because the criticisms, in emphasizing the difference and the heterogeneity of the two forms of time force them apart as completely incompatible. The tension in Meillassoux, problematic as it is, arises from the way in which the two forms are always connected together. The full extent of this connection and the tension that it engenders in Meillassoux’s thought can be traced through the response that Nathan Brown gives to Hallward’s criticisms and the defense of Meillassoux put forward there explicitly in terms of time and succession. Similarly, Martin Hägglund (2011) argues, in a deconstructive interpretation of Meillassoux, that the contingency of ‘hyper-chaos’ itself actually assumes the succession of time and thus comes into tension with its supposed eternality or instantaneousness. Hägglund uses this necessity of succession to argue for a necessary nature of the becoming-space of time, an argument he develops from Derrida’s notion of the ‘trace.’ Following both Brown’s and Hägglund’s exacerbations, by way of defense and criticism respectively,

issue of time-determination be used as a ‘key’ provided by Meillassoux to develop the interpretation of Kant presented in Chapters 4 & 5 below.

of the tensions within the temporalities of Meillassoux's 'speculative materialism' thus provides the conceptual framework within which the way that space appears as a disruptive feature of this system and its tensions.

The section of Brown's defense of Meillassoux that is important for revealing the importance of time focuses on the criticism made by Hallward that 'correlationism,' as defined by Meillassoux, is an epistemological theory that only concerns thoughts and knowledge and not issues of existence (this is consistent with Kant's identification of the "giving way" of the "proud name of ontology" in favour of "a more modest analytic of the understanding") (Brown, 142; see Hallward, 137). As an epistemological theory, 'correlationism' is only making assertions concerning the thinking or knowledge of objects and as such is capable of thinking of objects older than the thought without speculating on the nature of their existence. The objection to this criticism that Brown develops is concerned with how "Hallward's statement fails, however, to account for the logic of succession inherent in such a thought [of the 'ancestral'], which constitutes the crux of Meillassoux's analysis of correlationism's approach to the problem of ancestrality" (142). This objection reveals the way in which Meillassoux's 'challenge of ancestrality' *only functions because it contains or asserts a theory of time*. This identification of the underlying necessity of a theory of time for the 'challenge of ancestrality' is what Meillassoux identifies, and Brown notes, as the "deeper sense of ancestrality" that is at the core of its challenge to 'correlationism' (Meillassoux 2008a, 16; quoted in Brown, 143). What Brown calls "succession" is what Meillassoux refers to simply as "chronology" and specifically the "dia-chronic" assertion of a time before any human subjectivity, which cannot be directly 'given' to that subjectivity. Because the 'ancestral' sets out events that are not, and cannot be, given directly to the subject, the 'correlationist' confronts it via "logical retrojection" from the present to the past (the 'correlationist' theory of time according to Meillassoux), which destroys any meaningful sense of the existence of the 'ancestral' specifically *before* the existence of thinking subjects. As Brown summarizes it, what is at stake in this argument, "is a disagreement regarding the priority of the logical correlation between thinking and being over the chronological disjunction of thinking and being" (143). On this interpretation, the main point of contention between Meillassoux and the 'correlationists' is precisely the two competing theories of time; and the affirmation of the 'chronological' theory of time as

the only one capable of asserting the succession necessary to account for the beforeness of the ‘ancestral.’ The ultimate critique of Hallward’s objection formulized by Brown is that he “ignores Meillassoux’s critique of logical retrojection altogether” (143). Without necessarily affirming either side of this debate, what is the important issue to take from it, is the fact that what underlies much of the central argumentation of *After Finitude* is not solely the debate between realism and idealism (or ‘correlationism’) but rather the question of the nature of time.

Martin Hägglund commences his engagement with Meillassoux precisely through this problematic issue of time and especially in terms of succession.⁴⁸ Hägglund’s overall aim is not necessarily to reject or endorse Meillassoux’s position or its challenge to ‘correlationism’ and/or contemporary philosophy, but rather to use Meillassoux’s arguments and their explanations and shortcomings to develop his own philosophical position with regards to time and atheism. Although Hägglund engages with Meillassoux’s arguments for the time of ‘hyper-chaos’ and contingency as an absolute, it is through the ‘arche-fossil’ that he identifies the tensions and inconsistencies within Meillassoux’s treatments of time. The ‘arche-fossil’ is important for Hägglund’s interpretation of Meillassoux precisely because it “highlight[s] the problem of succession,” in exactly the same way as argued for by Brown in response to Hallward; however, as Hägglund continues, even in doing so, “Meillassoux fails to think through its [succession’s] logical implications” (2011, 117). By drawing out these inconsistencies in Meillassoux treatment of time and succession, Hägglund elaborates and clarifies his own theory of time, which was first set out in his 2008 book *Radical Atheism: Derrida and the Time of Life*. Hägglund’s theory of time, which is strongly influenced by Derrida’s notion of the ‘trace,’ identifies the “the logical co-implication of space and time” (Hägglund 2011, 118) and thus pre-empts (although the presentation of the argument is obviously much later chronologically) the structure of the centrality of space in relation to the role of time that is identified and examined

⁴⁸ In responding to Meillassoux in terms of time, Hägglund’s argument is similar to that of Catherine Malabou (2016), and although their explicit engagements with time are different, Malabou in terms of epigenesis and Hägglund in terms of the trace, there is some overlap between them and the problems they confront, such as the issue of the origin or emergence and development of either reason or life itself.

with regard to the philosophy of Kant in the final two chapters of this thesis, as well as the structure of the disruptions of space in Meillassoux's own theory of time.

The implications and inconsistencies that Hägglund identifies through the issue of succession develop in several ways. The first concerns Meillassoux's identification of the importance of the principle of non-contradiction as "an absolute ontological truth" (Meillassoux 2008a, 71) necessary for temporal becoming. Meillassoux asserts that the absolute ontological truth of the principle of non-contradiction is an implication of the 'principle of factuality.' He puts this forward as part of an argument that aims to prove that there is a thing in itself, in at least the Kantian sense, which also asserts that the thing in itself is a non-contradictory entity (67).⁴⁹ The argument that Meillassoux presents is that a temporal becoming, or even change, is impossible for a contradictory entity. This is because such an entity, in its contradictoriness, would always contain that which it is not, and thus could never change from what it is to what it is not, and thus it could never *become* anything other than what it already is. As Meillassoux concludes, "Accordingly, real contradiction can in no way be identified with the thesis of universal becoming, for in becoming, things must be this, *then* other than this; they are, *then* they are not" (70). Hägglund accepts that Meillassoux's argument is correct insofar as it considers the principle of non-contradiction and the possibility of change, but he rejects the way in which Meillassoux formulates becoming, and thus the progress of time, in terms of movement from something they are and then to something they are not. To support this rejection he considers how the argument about becoming relates to a non-contradictory entity, which he argues "would be indivisibly present *in itself*. Thus, it would remove precisely the 'dimension of alterity' that is required for becoming" (2011, 118). The language of the 'in itself' is slightly misleading here insofar as it echoes Kant's 'thing in itself,' which is part of the concern of Meillassoux's argument. What Hägglund means by this formulation is more akin to 'in its entirety,' an entirety that precludes anything alternative to what it is. Thus, once this entity becomes something other, then it can no longer be considered as that entity and thus the idea of it changing from one thing to another becomes untenable, and with the elimination of change also comes the elimination of becoming.

⁴⁹ Meillassoux goes further later in the book to argue that this thing in itself can, in contradiction to Kant, also be known through its mathematical primary properties.

Hägglund thus rejects Meillassoux notion of becoming, and succession, as a shift from one discrete moment to another different discrete moment. As he argues:

For one moment to be succeeded by another—which is the minimal condition for any becoming whatsoever—it cannot first be present in itself and then be affected by its own disappearance. A self-present, indivisible moment could never even begin to give way to another moment, since what is indivisible cannot be altered (2011, 118)

From this negative insight into succession, developed from Meillassoux's untenable notion of becoming, Hägglund puts forward his own version of succession that,

requires not only that each moment be superseded by another moment, but also that this alteration be at work from the beginning. Every moment must negate itself and pass away *in its very event*. If the moment did not immediately negate itself there would be no time, only a presence forever remaining the same (118).

Without fully elaborating Hägglund's notion of time via this destruction of the moment, the 'trace,' and the becoming-space of time and the becoming-time of space, the notion of succession as requiring a destruction of the present moment is useful for revealing what Hägglund calls "an inconsistency in Meillassoux's argument" (120).

This 'inconsistency' arises when Hägglund considers the relation between contingency and succession. This consideration takes place in the context of a passage from *After Finitude* that Aaron J. Hodges suggests may be problematic for Hägglund's notion of time as radical destructibility, because Meillassoux's 'principle of factuality' rejects the necessity of destruction just as much as it rejects any necessary entity (Hodges, 102). As the section from Meillassoux argues, to assert the necessity of destruction: "is still to obey the injunction of the principle of reason, according to which there is a necessary reason why this is the case (the eventual destruction of X), rather than otherwise (the endless persistence of X)" (2008a, 63). The full implication of Meillassoux's rejection of the principle of sufficient reason and assertion of the necessity of contingency entailed by the 'principle of factuality' is, instead, to assert that "anything might happen, even nothing at all, so that what is, remains as it is" (63). To argue for the necessity of destruction is, for Meillassoux, still to assert some sort of defining reason, and thus the elimination of reason also contains the elimination of

necessary destruction and the possibility of stasis in which everything remains as it is. For Hägglund, this argument is untenable because “An entity to which nothing happens is inseparable from a necessary entity” (2011, 120), which Meillassoux argues explicitly against (2008a, 65-66) and thus the necessity of contingency requires succession. As Hägglund concludes: “Contingency presupposes succession and there is no succession without destruction” (120). There is, however, a problem with Hägglund’s argument insofar as he simply asserts the necessity of succession and the inseparability of an unchanging entity and a necessary entity. On the latter point, Meillassoux explicitly specifies that as a result of ‘hyper-chaos,’ “We could certainly envisage the emergence of an entity which, as a matter of fact, would be indiscernible from a necessary entity, viz., an everlasting entity, which would go on existing, just like a necessary entity,” but he equally asserts that “this entity would not be necessary, and we would not be able to say of it that it will actually last forever, only that, as a matter of fact, and up until now, it has never ceased to be” (2008a, 66). The postulation of a ‘hyper-chaotic’ everlasting entity is not a necessary entity; Meillassoux makes this distinction very clear. The inseparability that Hägglund notes is instead only an indiscernibility that could be eliminated through a proper rational consideration of the ‘principle of factuality.’ But this does not mean that Meillassoux is right and Hägglund is incorrect in his analysis, it only shifts the point of the tension in Meillassoux.

It is not eternal and unchanging entities that are a problem for Meillassoux or the contingency of the ‘hyper-chaos’ he asserts. Rather, it is when this contingency attempts to think succession that it becomes problematic. This problem of succession for Meillassoux was already evident in Hägglund’s consideration of the inconsistencies in Meillassoux’s account of becoming in relation to the principle of non-contradiction. In that case, Hägglund argued that Meillassoux’s account of becoming in terms of one thing giving way to another thing could not actually be considered as succession but only as discrete moments. As such, each of those instantaneous moments, as unconnected to each other, are in fact eternal and unchanging, there is no temporal relation between them. This is also the ‘eternality’ of ‘hyper-chaos’ identified by Gratton. Meillassoux’s contingency does not depend upon succession and, as Hägglund phrases it, “the unpredictable passage from one moment to another” (120), instead it precludes the very possibility of any succession and is only ever eternal. Thus, rather than being indiscernible from a necessary entity, the unchanging entity

produced by ‘hyper-chaos’ is actually indiscernible from the impossibility of considering change in the instantaneous moments of Meillassoux’s account of ‘becoming.’ This does not mean that succession is not a problem for Meillassoux. In fact, it shows precisely how the issue of succession as succession is the problem, and not the need to reconcile the eternal entity with contingency. It is because Meillassoux, in his very consideration of an unchanging and eternal entity, suggests that there could be some time other, either before or after, when the eternal entity is also otherwise, that the issue of the possibility of succession arises. For, as Hägglund argued in his consideration of becoming, only in successive time is change possible, and a time made up of discrete instantaneous moments provides no account or possibility of change. It is succession and not eternity or unchanging entities that is that is a problem for Meillassoux, and this is why, as Hägglund observes, Meillassoux’s omission in “theoriz[ing] the implications of succession... comes at a significant cost for his argument” (120).

The price of this ‘cost’ is highest with regards to Meillassoux’s argument from ‘ancestrality.’ This is to be expected because, as Brown argued in his response to Hallward, the argument from ‘ancestrality’ is explicitly an argument about the nature of time, and specifically one that puts forward chronological successive time. Thus, Meillassoux’s failure to think the implications of the succession of time appears most starkly in the inconsistencies contained in arguments about the ‘ancestral.’ Hägglund addresses these inconsistencies by examining how Meillassoux addresses the ‘ancestral’ argument about the emergence of life from inorganic matter in a paper titled ‘Potentiality and Virtuality’ (2011).⁵⁰ He draws attention to how Meillassoux presents the question of the emergence of life from the inanimate matter of the world in terms of a choice between “Either a ‘continuism’, a philosophy of immanence—a variant of hylozoism—which would have it that *all* matter is alive to some degree; or the belief in a transcendence exceeding the rational comprehension of natural processes “ (Meillassoux 2011, 235; quoted by Hägglund, 121). The ‘answer’ that Meillassoux provides in order to escape either philosophically objectionable option, is the possibility of the emergence of life *ex nihilo* due to the radical contingency of

⁵⁰ Although it would be pertinent to her biologically-influenced examination of Kant and Meillassoux, Malabou (2016) does not refer to this paper or the account of the origin of life that Meillassoux presents there.

‘hyper-chaos’ with which, in his words, “We thus glimpse if all-too-briefly, the outlines of a philosophy emancipated from the Principle of Sufficient Reason” (236). While for Meillassoux, this analysis of the problem of the emergence of life lends support to his rationalist and metaphysical philosophy of ‘hyper-chaos,’ for Hägglund it is an example of Meillassoux’s ‘disregard’ for the evidence of science, which is because “he univocally privileges logical over material possibility” and “eliminates time in favour of a punctual instant” (122). To support this, Hägglund refers to evolutionary biology and the work of Daniel Dennett, who shows how Darwinism provides, in Hägglund’s words, “precisely the account of how life evolved out of nonliving matter and of how even the most advanced intentionality or sensibility originates in mindless repetition” (121). This is not support for either the vitalism or the transcendence of life, but rather its de-vitalization, as part of a material process that does not require an instant of emergence *ex nihilo*, but rather a long successive progression from material conditions.

This example of how Meillassoux’s metaphysical system of contingency not only comes into conflict with the empirical sciences but outright contradicts them, is due to the ‘inconsistencies’ (Hägglund’s word) or tensions (the word used here) in the theories of time that Meillassoux puts forward. This goes beyond merely pointing out how the two forms of time—eternal ‘hyper-chaos’ and successive chronology—are heterogeneous, and shows how Meillassoux’s assertion of both, as central elements of his argument, puts them in direct conflict over the issue of the succession of time in general. Against Meillassoux’s inconsistent and problematic conception of succession, Hägglund asserts and elaborates his own theory of time, which provides a useful conceptual framework for assessing both Meillassoux’s and Kant’s temporal philosophies. Some elements of Hägglund’s theory of time have already been set out. The most important of these is the destruction of succession by which one moment changes into the next and time is defined as “nothing but the negativity that is intrinsic to succession” (2011, 121). The confrontation between Meillassoux and Hägglund, put forward by Aaron Hodges, attempted to complicate Hägglund’s theory of time by asserting Meillassoux’s criticism of the necessity of destruction as still subject to a principle of reason, a position that Meillassoux rejects by postulating the possibility of an unchanging entity that resides in a time without becoming, i.e., without destruction. What was put forward as an objection is used by Hägglund as a means through which

to further elaborate his theory of time. He argues that, “Meillassoux’s opposition between destruction and persistence is misleading” because “Persistence itself presupposes an interval of time, which means that nothing can persist unscathed by succession” (120). The necessity of persistence for any period or succession of time was elaborated above through Kant’s First Analogy of Experience and the argument put forward here makes a very similar point, that for succession to be considered as covering a period of time there must be something consistent—persisting—over all elements of that period. Hägglund does not refer to Kant, but rather uses this necessity of persistence over any successive period of time to elaborate his own Derrida-influenced theory of time.

He argues that the “destruction that is involved in succession makes any persistence dependent on the *spacing* of time, which inscribes what happens as a spatial trace that remains, while exposing it to erasure in an unpredictable future” (120). These ideas of the ‘spacing’ of time and the ‘spatial trace’ that remains and is ‘inscribed’ by the destructive succession of time are integral elements of the theory of time that Hägglund develops from the notion of ‘spacing’ put forward by Jacques Derrida, and elaborates at length in his book *Radical Atheism*; but which he has also briefly outlined earlier in his engagement with Meillassoux. In that earlier outline, he argues that from the alteration and destruction involved in successive ‘ceasing-to-be,’ “It follows that a temporal entity cannot be indivisible but depends on the structure of the trace. The trace is not itself an ontological entity but a *logical structure* that explains the becoming-space of time and the becoming-time of space” (2011, 118). This definition of the ‘trace’ as a ‘logical structure’ again recalls the Analogies of Experience, where the various logical structures of the categories of relation were used as the means to determine time in empirical experience. In this case, instead of taking these structures from logic as does Kant, Hägglund (and Derrida before him) operate purely at the level of what Kant would call the ‘Aesthetic,’ that is in terms of the logics of time and space alone.⁵¹ The present aim is not to compare Hägglund/Derrida and Kant, but rather, to

⁵¹ This is why in *Radical Atheism* Hägglund argues that, “Derrida can be said to write a new transcendental aesthetic (which accounts for the synthesis of temporality without positing a formal unity of apperception that subordinates the division of time)” (2008, 10). The hint set out here and attributed to Derrida, that it is possible to account for the synthesis of temporality (what is properly the task of the Deduction) in terms of the Aesthetic, i.e., in terms of the relation between time and space, is explored in Chapter 5, below, through an examination of

draw out Hägglund's insight concerning the "co-implication of space and time" (120), which provides a particularly useful trope for examining the philosophy of Meillassoux (and by extension, Kant). Hägglund summarizes the basic features of this 'co-implication' of time and space in order to set out the details of his theory of time in terms of the 'trace,' but the more basic features of his descriptions are important for delineating the features of space that also disrupt Meillassoux's (and Kant's) discussions of time. It is thus worth examining Hägglund's description in full:

The classical distinction between space and time is the distinction between simultaneity and succession. The spatial can remain the same, since the simultaneity of space allows one point to coexist with another. In contrast, the temporal can never remain the same, since the succession of time entails that every moment ceases to be as soon as it comes to be and thus negates itself. By the same token, however, it is clear that time is impossible without space. Time is nothing but negation, so in order to be anything it has to be spatialized. There is no 'flow' of time that is independent of spatialization, since time has to be spatialized in order to flow in the first place. Thus, everything we say about time (that it is 'passing', 'flowing', 'in motion' and so on) is a spatial metaphor. This is not a failure of language to capture pure time but follows from an originary *becoming-space of time*. The very concept of duration presupposes that something remains across an interval of time and only that which is spatial can remain. Inversely, without temporalization it would be impossible for a point to remain the same as itself or to exist *at the same time* as another point. The simultaneity of space is itself a temporal notion. Accordingly, for one point to be simultaneous with another point there must be an originary *becoming-time of space* that relates them to one another (2011, 120).

The essential point here can be intuitively grasped, that in order to determine a period of time, as a shift from one time to another, those two points must somehow be considered together and the 'togetherness' of those points can only be thought in the simultaneity of space. However, by the same standards, the determination of space as the 'at the same time' of simultaneity is a temporal notion, and thus the simultaneity of space itself depends upon a notion of time. This is the 'co-implication' of time and space as described by Hägglund, and developed from Derrida's notion of the 'trace' as

Kant alone and the argument for the importance of space in his philosophy, in addition to the importance of time that has already been discussed in §3.2. It is worth noting, that in *Of Grammatology*, when Derrida introduces the notion of a "new transcendental aesthetic," he specifically states that it, "must let itself be guided not only by mathematical idealities but by the possibility of inscriptions in general, not befalling an already constituted space as a contingent accident but producing the spatiality of space" (290), which explicitly articulates such a possibility in terms of space, not time.

a logical structure.⁵² A similar co-implication of space and time is set out in Chapter 5, below, in terms of Kant’s philosophical system. However, what is important to take from Hägglund’s description at this stage—when the details of Kant’s treatments of time and space are only partial—is the way in which he asserts the necessity of the spatial metaphor for any discussion of time. What is important about this recognition about the necessity of space at least in the form of the metaphor in any discussion of time, is that Hägglund identifies a way to examine the ‘co-implication’ of space and time, even in discussions of time that do not directly address it. Even if space as a metaphysical or logical structure, and its necessary ‘co-implication’ with time, is not directly or overtly present in such discussions of time, the presence of that ‘co-implication’ can still be discovered via an examination of the use of the spatial metaphor.

The identification of the spatial metaphor as a way for interrogating time and the philosophy of time is particularly pertinent for interpreting Meillassoux’s temporal philosophy of ‘hyper-chaos’ and ‘ancestrality,’ and especially the tension between the two. Meillassoux does not explicitly examine any sort of co-implication of time and space—although he does discuss each of them separately, more so time—but, as Hägglund’s analysis shows, this unexamined co-implication results in the tensions and inconsistencies that manifest in *After Finitude* around the heterogeneous relation between ‘hyper-chaos’ and the chronology or succession of the ‘ancestral’ and the empirical sciences. Despite, his neglect of the co-implication of time and space, Meillassoux cannot escape the necessity of using the spatial metaphor when he

⁵² Hägglund also argues that this structure of the ‘trace’ is “is implicit in scientific accounts of how time is recorded in biological processes and material structures” (119). In his examination of the debate about the emergence of life from inorganic matter, and in particular Dennett’s de-vitalization of life by the explanation of evolution in terms of material processes, Hägglund reasserts the ‘co-implication’ of time and space in order to argue that, “The succession of time could not even take place without material support, since it is nothing in itself and must be spatialized in order to be negative—that is, to negate anything—at all. The notion of arche-materiality thereby allows us to account for the minimal synthesis of time—namely, the minimal recording of temporal passage—without presupposing the advent or existence of life” (123). This connection between space and materiality (as ‘arche-materiality’), through which Hägglund develops his own ‘radical atheist materialism’ is also present in the argument put forward in Chapter 5 below, that Kant’s important treatment of space and its inter-relation with time is central to the debate between idealism and realism (as materialism). Hägglund’s criticism of Meillassoux thus anticipates this argument, although it comes much later in the history of philosophy than Kant’s original argument.

discusses time, and thus the tensions in his temporal philosophy can be directly examined by identifying and examining his use of the spatial metaphor, and also his explicit discussions of space.

As he introduces the problem of ‘ancestrality’ and the specific examples of ‘arche-fossils’ in *After Finitude*, Meillassoux uses the spatial metaphor a very revealing way, he writes: “It’s just a line. It can have different shades, a little like a spectrum of colours separated by short vertical dashes. Above these are numbers indicating immense quantities.” (9). The numbers are the dates that correspond to the chronological ordering of how long ago the events detailed—the accretion of the Earth, the emergence of *Homo Sapiens*, etc.—occurred, and the line is a representation of time, stretching back from the now of the present and presumably forwards into the future. Here Meillassoux puts forward the image of chronology that he is using to argue against ‘correlationism,’ and importantly he defines this time and its determination explicitly through the use of the *spatial* metaphor of a line. In this case it is the spatiality of the line and the simultaneity of all its points that supplies the element of eternity that Meillassoux argues is a fundamental feature of time as he argues for his formulation of ‘hyper-chaos’ as the absolute. It also, to return to the three modes of time outlined by Kant in the Analogies, provides persistence between the end points of the line, across the simultaneity of the plane upon which it is drawn. The chronology of the time of the ‘ancestral’ can only operate through the spatiality of the line, which guarantees the duality of its ‘dia-chronicity,’ the possibility of comparing two points of time together through the simultaneity of space.

In a sense, the role of the eternal played by this spatiality makes sense, in that it is a theme that crops up in several places in *After Finitude*. Meillassoux has already defined his aim as the reclamation of,

the *great outdoors*, the *absolute* outside of pre-critical thinkers: that outside which was not relative to us, and which was given as indifferent to its own givenness to be what it is, existing in itself regardless of whether we are thinking of it or not; that outside which thought could explore with the legitimate feeling of being on foreign territory—of being entirely elsewhere (7).

Again, it is through the spatial metaphor—with the important addition of a connection with *externality*—that Meillassoux expresses the uncorrelated absolute that he seeks to

rehabilitate.⁵³ This becomes even more explicit when he later aligns it with the world revealed by the sciences of the Galilean-Copernican revolution and defines this as, “The world of Cartesian extension ... a world that acquires the independence of substance” (115).⁵⁴ There is an intuitive correctness to Meillassoux’s identification of the absolute with spatiality, because space as simultaneity instead of succession is clearly in a sense eternal, or rather, timeless, attributes that Meillassoux will also ascribes to ‘hyper-chaos’ despite its nature as flux, or the ‘swarm’ of appearances. The opposition between simultaneity and succession, however, reinforces the impossibility of the former alone determining time, as in a world of pure simultaneity—a pure metaphysics of presence—there is no movement of time to be determined.⁵⁵ The spatial metaphor of the straight line as an image of chronology only then works precisely because it is a metaphor, and that time itself is not actually merely a simultaneous straight line stretching backwards and forwards, the very determination of backwards or forwards is impossible by the standards of the line alone. A movement or directionality, precisely the sort of orientation that Meillassoux eliminates from the world of pure extension, is required in order for determination to be both possible and necessary.

⁵³ This ‘externality’ of the ‘great outdoors’ is contrasted with what Meillassoux calls the “radical exteriority” of ‘correlationism’ (and phenomenology in particular), which incorporates the exteriority of objects within the ‘correlationist two-step’ that conjoins the subject and object together. Meillassoux also refers to this ‘radical exteriority’ as a ‘transparent cage,’ within which ‘correlationist’ subjects are “truly imprisoned within this outside proper to language and consciousness given that we are *always-already* in it (the ‘always already’ accompanying the ‘co-’ of ‘correlationism’ as its other essential locution), and given that we have no access to any vantage point from whence we could observe these ‘object-worlds,’ which are the unsurpassable providers of all exteriority, from the outside” (2008a, 7). These two types of ‘exteriority’ will be addressed below in Chapter 5 in terms of Kant’s consideration of things ‘outside us’ in his Refutation of Idealism and the Fourth Paralogism of the A-Edition of the *Critique*.

⁵⁴ Although it must be noted that earlier in *After Finitude* he has backed away from completely identifying the absolute with Cartesian extension and pure primary qualities as, “one cannot imagine an extension which would not be coloured, and hence which would not be associated with a secondary quality” (3). Hence his need to reconfigure the Cartesian aim to know the world absolutely and to know it through reason alone into one that reveals this world as that of ‘hyper-chaos’ and time. Nonetheless, the use of the spatial *metaphor* persists.

⁵⁵ A diagnosis and critique of Meillassoux’s ‘speculative materialism’ and the wider ‘speculative realist’ tendency as metaphysics of presence can be found in Peter Gratton’s ‘Post-Deconstructive Realism: It’s About Time’ (2013)

This brief treatment of the disruptive nature of spatiality and the tensions and inconstancies of time in Meillassoux's system is not intended to be comprehensive or complete. It is not an attempt to reconcile his account of the tension of time, or even to begin to suggest how he could address these issues. Instead, the aim is to reveal the problematic relation between time and space in his own particular temporal philosophy and its relation to that of Kant, and use that as a clue, through his parallels with Kant and through the interpretation of Kant developed in response to Meillassoux's interpretation, which stressed the centrality of the issue of time-determination in his thought, to point the way towards an alternative and attentive examination and interpretation of the relation between time and space and the issue of time-determination in Kant himself, to see if the parallels developed here can be read backwards towards the original connection between time and space, and thus the importance of the latter, within Kant.

This Chapter addressed how after the destruction of dogmatism outlined in the previous Chapter, both Kant and Meillassoux set about reconfiguring the principle of sufficient reason. They both look to Hume and in particular his skeptical problematization of the issue of induction and causality as a key insight that they can use motivate their reconfigurations. Their conclusions, although significantly different, strikingly revolve around the same set of issues: the relation between what Kant called the ground of knowing and the ground of being; the possibilities and limitations of knowledge; the nature of time and its role and relation to these concerns; and ultimately the problematic issue of time-determination. This final issue, in the problematic form that is found in Meillassoux's arguments, provides the clue to the path that the next two Chapters follow. In doing so, it moves from the exclusive focus on the role of time in Kant, and the parallels found in the thought of Meillassoux, and addresses the role of space and spatiality that, it is argued, is an integral and ineliminable element of Kant's thought, even if it remains a problematic and disruptive element within that thought.

It is the determination of the time of chronology (the 'dia-chronic' time of science) that is problematic for Meillassoux from the point of view of his arguments for time as 'hyper-chaos.' These problems, however, also manifest through a series of disruptive eruptions of spatiality. The most pertinent of which is the use of the metaphor of the

line to express the determination of time. This use of the spatial metaphor provides the link that is used as a way back into to Kant in order to underscore the importance of space in his thought. The next Chapter thus examines how Kant uses spatial metaphors, especially geographical metaphors. These metaphors are extremely useful in understanding how space as extension also functions within Kant, for they often, in their very metaphoricity, obscure the more literal account of space that Kant implicitly (and disruptively) puts forward. However, they are also themselves especially useful for rearticulating the elements of Kant's thought already directly discussed, in particular the already-often-hinted-at importance and distinction between boundaries and limits and the role of each within Kant's thought. Thus examining these metaphors provides a path back into towards a direct discussion of space as it appears in the *Critique* in Chapter 5, where the full role of space as something necessary to the determination of time, and thus of at least equal importance as time, is addressed.

Chapter 4. From Metaphors to the Forms of Metaphysics: Kant and Space

The previous Chapter concluded with an examination of the way in which space appears as a problematic and disruptive element or metaphor within the explicitly temporal system that Meillassoux proposes to erect in the place of the Kantian ‘correlationist’ philosophy he criticizes. It argued that because of the surprising parallels between Meillassoux’s temporal philosophy and the temporal philosophy of Kant, the disruptions that arise through the appearance of space in Meillassoux’s system can also be found in, or even traced back to, Kant’s system. Thus, this Chapter examines and expands upon this suggestion by investigating how space also appears in Kant’s system and thought and the insights and disruptions that it produces for that philosophical system.

The argument this Chapter follows is the same as that already sketched out in the investigation of the spatial disruptions within Meillassoux in §3.4 above. That investigation commenced from the image of the line and the explicit time-line that Meillassoux uses to represent the chronology of ‘ancestrality.’ Kant uses the image of a line to represent time in a very similar way when he sets out his account of space and time in the Transcendental Aesthetic at the start of the *Critique of Pure Reason*. This image of a line was already identified in §1.5 above in the preliminary examination of the relation between time and space in Kant via the analysis of Peter Strawson. The section where Kant uses this image reads: “And just because this inner intuition [i.e., of time as the form of inner sense and thus the form of all appearances and cognition] yields no shape we also attempt to remedy this lack through analogies, and represent the temporal sequence through a line progressing to infinity” (A33/B50). As identified in the preliminary discussion, this use of the analogy of a line is at the heart of a tension between space and time that runs through all of the *Critique* (a more detailed consideration of Kant’s use of this line is found in §5.2 below). In §1.5 above, this tension was articulated by three different relations between space and time that Kant sets out early in the Aesthetic: their *heterogeneity*, the need for time to be expressed in the spatial *analogy* and the *priority* of time over space. It is the priority that Kant ascribes to time and consequently the central position that it and its determination has throughout the *Critique* (as argued in the previous Chapter) that accounts for the

prioritization of the role of time in interpretations of Kant, but the necessity of the spatial analogy and the tension that ensues from it points the way toward the need to re-assess the role of space within not only those inheritance, but also in the *Critique* itself. The explicitly metaphysical role of space is addressed more directly in the next Chapter, but this one follows the hint set out by the parallels between Kant and Meillassoux highlighted at the end of the previous Chapter. It commences from the analogy of the line that they use and through that image examines how space functions as a metaphor and thus how the predominance of space in the form of metaphor both covers over, but in doing so also gestures towards, the importance of space as a form necessary to metaphysics and the physical knowledge or experience of the world.

The preliminary discussion in §1.5 also briefly elaborated the role of space as a form of intuition in the Critical philosophy. There, it is argued, via Strawson, that for Kant the possibility of time-determination in fact depends upon the abiding framework of physical space, which is necessary to provide a context against which any determination is possible. The next Chapter extends upon this preliminary analysis of space, but already merely recognizing its importance prompts the question of why, if it is so important, is it not already considered central to Kant's system? Following Strawson's analysis once again is illuminating on this point. Immediately following his claim that the truth of independent objects is that they are spatial, Strawson takes care to point out that this does not mean the spatiality is the only way to consider or conceive of them. He suggests that the concept of spatiality could be "stripped of its usual sensory associations and [given] a mainly formal meaning" (1966, 25). It is the form of externality and the eternality of simultaneity that is important for the operation and contextualization of any such abiding structure. This possible 'formalism' of space is found, for example, in Heidegger's *ecstatic* temporality outlined in *Being and Time*, which asserts that it is time that is at-the-same-time outside of itself and thus makes its own determination and the determinations of being-in-the-world possible. But it is the more general claims that Strawson draws from this possibility that are of interest here. He presents an important corollary from this formal meaning of space, he suggests that even if it is stripped down to a mere form "the spatial mode is at least that *on analogy with which* any alternative mode of existence of independent objects of our experience would have to be conceived by us" (25). Thus, even if it is space that provides the abiding framework of independent reality, such reality does not necessarily have to be

explicitly considered spatial to be postulated, or argued for or discussed. However, what cannot be avoided is that this discussion must at least take place through a spatial analogy, and this returns to the second point drawn from the Transcendental Aesthetic—the *analogy* of time and space (and the parallel point drawn from the discussion of the spatial analogy in Meillassoux)—although now the necessity of the spatial analogy is redrawn as an analogy of space. It is this persistence of space at least as an analogy, in the same terms that Hägglund identified the necessity of the spatial metaphor when talking about time, that accounts for not only Meillassoux’s use of the term ‘great outdoors,’ but also, and more importantly for the claim that Kant must be considered a spatial thinker, it accounts for the persistence and predominance of spatial metaphors in Kant’s thinking.

In setting out the project of the *Critique of Pure Reason* Kant often makes recourse to spatial geographical metaphors concerned with navigation, cartography and geography. This tendency, as suggested above, is part of a wider shift from the necessity of the spatial analogy, to the possibility of the use of analogies of space in other forms and finally to the very real use of the spatial metaphor, which now extends beyond discussions of time alone and permeates throughout Kant’s philosophy as a whole. Examining Kant’s spatial metaphors does more than just illustrate the importance of space and sciences of space for him, they also reveal how the project of the *Critique of Pure Reason* is itself intimately tied up with conceptions of space and the ‘mapping out’ of the limits of knowledge and the bounds of sense. Looking at Kant’s spatial metaphors thus not only provides another way to approach and develop the necessity of interpreting him spatially, but also shows how space has undergone a sort of triple-obfuscation in his thought, and how it is possible to think of Kant, especially in the A-Edition of the *Critique*, as merely a thinker of metaphors of space rather than of space directly. The metaphor ‘carries over’¹ the importance of space into

¹ The operation and structure of metaphor itself is already spatial as a ‘carrying over’ of meaning between two apparently different things/meanings. The ‘carrying over’ of the metaphor is evident in the etymology of the word itself, which comes from the Greek *metapherein* ‘to transfer’ or, more literally, ‘carry across,’ made up of *metá-*, ‘among,’ ‘across’ or ‘after;’ and *phérō*, ‘I bear’ or ‘carry.’ Thus while a metaphor may not itself be spatial, its very metaphoricity can only function through the already-spatial notions of holding things apart and allowing a movement, relation or commerce between them. This structure of spatiality that is integral to the operation of an idea itself is an example of a more fundamental

other ways of thinking, but in doing so it also hides the importance of space in its mere metaphoricity. This Chapter thus examines how space appears in the *Critique of Pure Reason* through metaphors and shows how they are directly related back to Kant's explicit thematization of space as the sensible form of outer sense.² Furthermore, tracing how the importance of space is both hidden and evident in the use of spatial metaphors allows it to be shown how space (as the external extension of outer sense) initially became 'covered over' just as much as it was 'carried over' in these metaphors and how Kant hid the true importance of space from himself as he transitioned into his properly Critical period and thinking, especially in the A-Edition of the *Critique*, and how time (and inner subjectivity) was able to become the dominant element of this thought (this is examined in §5.2 below). This is contrasted with a repeated and explicit engagement with space and spatiality in his earlier pre-Critical works, an engagement that the Critical philosophy eschews until 1786, when space re-appears as important in the scientific *Metaphysical Foundations of Natural Science* and the short essay *What Does it Mean to Orient Oneself in Thinking?* (hereafter *Orientation in Thinking*), which, through its connections to the pre-Critical 1768 essay *Concerning the Ultimate Ground of the Differentiation of Directions in Space* (hereafter *Directions in Space*), can serve as a path connecting the Critical philosophy, with its concern with orientation in thinking, with the more concrete question of orientation in space and spatiality in general.

sort of 'spacing' that is identifiable throughout the history of philosophy, including Kant. For more on this 'spacing' see Sallis (1987) and Benjamin (1991, Chapter 2).

² This line between the metaphorical and metaphysical aspects of Kant's thoughts concerning space is not always straightforward. Pamela Sue Anderson, in her paper 'Metaphors of Spatial Location: Understanding Post-Kantian Space' explores some of the murkiness around this issue. She draws on Michele Le Doeuff's work on *The Philosophical Imaginary* (2003) in order to show how some of Kant's images and metaphors, in particular the use of the *island* of truth, can be used to present a different interpretation of Kant. This is an interpretation where the metaphoricity of the metaphors are taken to reveal something that itself is interesting and, importantly, different to what would be found if they were merely treated as a way of explaining something else, the metaphor itself becomes the point of a productive interpretation. A similar tactic is employed by John Sallis in his book *Spacings—of Reason and Imagination: In Texts of Kant, Fichte and Hegel* (1987), where he argues that space only ever operates through its metaphoricity in the more abstract sense of space as spacing. The argument put forward in the present thesis instead approaches Kant's use of space from what can be considered the opposite direction, whereby it shows how investigating what Kant says about space is not only integral to his project, but is also useful for elucidating the more subtle sense of 'spacing.'

§4.1. The ‘Battlefield’ of Metaphysics

The sort of spatial or cartographic geographical metaphors that Kant uses are present from the very first page of the Preface to the A-Edition of the *Critique of Pure Reason*, there Kant sets out “The battlefield [*Kampfplatz*] of these endless controversies [that] is called **metaphysics**” (Aviii). Before Kant has even begun to develop his own position, he has already described the context of his discussion as a ‘field’ (or more accurately a ‘place’ [*Platz*]), and what is more, as a ‘battlefield,’ where knowledge of terrain and possible movements are of utmost strategic importance. Directly preceding this obviously cartographic metaphor, Kant has already given another important spatial metaphor, which is much more significant in the context of his soon-to-be-developed philosophical system. In describing the nature of these controversies fought on the battlefield of metaphysics he speaks of how “reason sees itself necessitated to take refuge in principles that *overstep* all possible use in experience” and thus “surpass[es] the *bounds* [*Grenze*] of all experience” (Aviii, italics added). The issue of overstepping boundaries, in this case the boundaries of justified³ knowledge and experience, and indeed the identification of such boundaries (and the associated yet importantly different idea of limit [*Schranke*]) aptly describe Kant’s overall project in the *Critique of Pure Reason*. As shown in Chapter 2 above, the properly *critical* part of the project aims to show how reason progresses beyond such boundaries and into areas that are no longer justified, resulting in unsubstantiated doctrines concerning God, the world and the soul. Importantly, the spatial metaphor persists beyond these boundaries (and this

³ The juridical metaphor is another that Kant often uses. It is also illuminating to note how the judicial sense of ‘deduction’ (and the word Kant uses in German is the same Latin cognate—*Deduction*—as the English version) as Kant uses it in the Transcendental Deduction, in fact also has an important geographic and spatial element. As Dieter Henrich shows in his paper ‘Kant’s Notion of a Deduction and the Methodological Background of the First *Critique*,’ the juridical sense of deduction as Kant uses it refers to the practice in his times of performing a ‘deduction’ to ascertain what laws, i.e., the laws of which area, apply to the case under review, a necessity that dates back to the myriad of States, provinces or territories and their various and diverse legal systems that existed in the Holy Roman Empire (Henrich, 32). It is also worth noting that the very word ‘deduce’ itself already operates with a spatial sense, deriving from the Latin ‘to carry something forth to something else’ (Henrich, 31), or to lead, from *de-* ‘down’ and *ducere* ‘lead.’ The precise nature of the Transcendental Deduction, including its juridical overtones, is discussed in greater detail in Chapter 5 below.

indicates something key to the nature of boundaries), although in a form other than that of either knowledge or experience; as Kant puts it, “Thus I had to deny **knowledge** in order to *make room* for **faith** [*um zum Glauben Platz zu bekommen*]” (Bxxx, italics added). This extended space, which includes both bounded knowledge and the room beyond those bounds both as an overstepping and as faith, is the contested ‘field’ on which the ‘battles’ of metaphysics are fought.

The geographical and military metaphor persists as Kant examines the sort of metaphysical skirmishes that have preceded him, in particular those of dogmatism and skepticism set out in the ‘canonical distinction’ and elaborated upon in the preceding two Chapters above. Kant distinguishes the dogmatists who “continually attempt to rebuild [*anzubauen*]” (although as Kant sarcastically notes “never according to a plan unanimously accepted among themselves”) and the skeptics, “nomads who abhor all permanent cultivation of the soil [*Anbau des Bodens*]” (Aix). In the *Prolegomena* Kant presents this battle in more explicit terms of building and destruction, there he describes how “human reason is so keen on building that more than once it has previously erected a tower, but has afterwards torn it down again in order to see how well constituted its foundation may have been” (4: 256).⁴ Here Kant’s metaphors slip

⁴ Later in the *Prolegomena*, in the appendix added in defense of transcendental idealism against the charge that it is merely another form of Berkeley’s subjective idealism, Kant presents his own position in relation to the ‘towers’ of reason and at the same time resists the charge that his investigation into what are or can be considered as ‘transcendental’ represents a yearning for something ‘higher.’ He writes that it—his transcendental philosophy—is “On no account *higher*. High towers and the metaphysically-great men who resemble them, around both of which there is usually much wind, are not for me. My place is the fertile *bathos* of experience” (4: 374). This use of the metaphors of towers and Kant’s disdain for them can also be interpreted in light of their appearance in the first *Critique* where at the very start of the Transcendental Doctrine of Method (i.e., after all the positive work of the Analytic and the negative work of the Dialectic, which together constitute the Doctrine of Elements) he writes:

If I regard the sum total of all cognition of pure and speculative reason as an edifice for which we have in ourselves at least the idea, then I can say that in the Transcendental Doctrine of Elements we have made an estimate of the building materials and determined for what sort of edifice, with what height and strength would suffice. It turned out, of course, that although we had in mind a tower that would reach the heavens, the supply of materials sufficed only for a dwelling [*Wohnhause*] that was just roomy enough for our business on the plane of experience and high enough to survey it (A707/B735).

What is notable here is that Kant’s disdain for ‘towers’ of metaphysics is not merely a matter of taste, but is necessary outcome of the work of the *Critique of Pure Reason*. Instead of the supposedly ‘higher’ tower (like those of the ‘metaphysically-great men’) Kant has constructed a *dwelling*, a *Wohnplatz* (now no longer a *Kampfplatz*, this sense of dwelling place, which is related to the *Wohnhause* from the section above is elaborated below), a residence, which

and show that they are not perfect descriptions. The fact that the dogmatists, in their continual disagreements, can also be responsible for tearing down their ‘towers’ just as much as they can be destroyed by the ‘raids’ of the skeptics, shows that this is not a mere confrontation between the two modes of thought.⁵ Instead, both modes are undertaking the same project, that of metaphysics. This can be seen in the important, if subtle, difference in the spatial metaphor by which the ‘battlefield’ of metaphysics is described in the Preface to the B-Edition of the *Critique*. There, Kant writes of how,

In metaphysics we have to retrace our path [*Weg*] countless times, because we find that it does not lead where we want to go, and it is so far from reaching unanimity in the assertions of its adherents that it is rather a battlefield [*Kampfplatz*], and indeed one that appears to be especially determined for testing one’s powers in mock combat; on this battlefield no combatant has ever gained the least ground, nor has any been able to base any lasting possession on his victory. Hence there is no doubt that up to now the procedure of metaphysics has been a mere groping [*herumtappen*], and what is the worst, a groping among mere concepts (Bxv).⁶

In this description the distinction between the dogmatists as ‘cultivators of the soil’ who build ‘towers’ of reason, and the skeptics as ‘nomads’ performing ‘raids’ on these ‘towers’ has disappeared. The spatial metaphor persists though, both in the repeated image of the battlefield, but now also in the new image of metaphysics as a ‘*path*’ across or within that ‘field.’ There is, however, another quasi-spatial image here,

despite its lowly and bathetic status, is in fact, as will be shown below, the aim of Kant’s search for certainty in the ‘battlefield’ of metaphysics.

⁵ In his discussion of the transcendental ideals and the comparison with Plato’s ideas, Kant provides another, ‘subterranean,’ action of reason. He writes, “But instead of these matters [morality and freedom], we now concern ourselves with a labor less spectacular but nevertheless not unrewarding: that of making the terrain [*Boden*] for these majestic moral edifices level and firm enough to be built [*Gebäuden*] upon; for under this ground there are all sorts of passageways, such as moles might have dug, left over from reason’s vain but confident treasure hunting, that makes every building insecure” (A319/B375-6). Such undermining of grounds by reason foreshadows to some degree Kant’s own Critical ‘deconstruction’ of all grounds and their ‘falling away’ in order to expose the abyss of pure reason (see §2.3.3.3 above). This is also a passage that Sallis makes much use of in his investigation into ‘spacings’ (1987, Chapter 1).

⁶ The image of the ‘path’ of philosophy reappears right at the very end of the *Critique*, where it is incorporated into the military metaphor of the ‘battlefield’ of metaphysics. Kant writes of how, “The **critical** path [*Weg*] alone is still open. If the reader has had pleasure and patience in traveling along in my company, then he can now judge, if it pleases him to contribute his part to the making this footpath [*Fußsteig*] into a highway [*Heeresstraße*—literally, a military road]” (A855/B883).

which will become important as all of Kant's uses of space and spatial metaphors are developed, this is the image of metaphysics as 'groping.'⁷ This image will only be noted here, but is returned to later in §4.6, as the image of groping as a search that is performed blind and by feeling with the hands is one that will become important with regard to what Kant says about the idea of orientation and especially the concrete possibility of orientation in space. For now, it is the image of metaphysics as both a path and as a field upon which buildings can be constructed or destroyed that is important.

§4.2. *Hume as 'Geographer'*

The B-Edition Preface may not make any mention of the distinction between dogmatism and skepticism (its focus is more on the metaphors of and comparisons with the project, methods and results of the sciences), but the distinction reappears later in the *Critique* (in both Editions) in the second part of the book—the Doctrine of Method—in the chapter on 'The Discipline of Pure Reason in Polemical Use.' It is notable here that the B-Preface image of the path is more prevalent (even though this section is contained in both Editions) and the A-Preface image of building and raids is problematized as Kant considers the relation and development between the two modes of philosophy as they both work together as different aspects of the project of metaphysics. Here Kant is focusing on the role and power of skepticism and in particular of David Hume, who, in the ultimate of spatial metaphors, Kant describes as one of the most famous "geographers of human reason" (A760/B788). This reestablishes the image of metaphysics, and human reason, as a 'path' across a 'field,' but Kant goes on to elaborate the way that skepticism (and especially Hume as the figure of skepticism) operates on this 'field.' He writes:

⁷ The image of the danger of 'groping' is also evoked at Bxxx, where Kant states that, "we need merely to compare the culture of reason that is set on this [i.e., his] course of a secure science with reason's unfounded groping and frivolous wandering without critique." For further analysis of Kant's use of the metaphor of 'groping' see Morgan 2000, Chapter 1.

Thus skepticism is a resting-place [*Ruheplatz*] for human reason, which can reflect upon its dogmatic peregrination and make a survey of the region in which it finds itself in order to be able to choose its path in the future with greater certainty, but it is not a dwelling-place [*Wohnplatz*]⁸ for permanent residence [*Aufenthalte*]; for the latter can only be found in a complete certainty, whether it be one of the cognition of the objects themselves or of the boundaries [*Grenzen*] within which all of our cognition of objects is enclosed (A761/B789).

This is one of the richest sections of spatial metaphors in Kant (the other candidate—the ‘island of truth’—is discussed in §4.3 below), but that does not mean that they are especially clear. The metaphors are useful for describing the method and use of skepticism, they adequately point to the shortcomings of skepticism as part of the search for complete certainty, and also its strengths in that it does not blindly accept, and can thus assess, the progress made by dogmatism. However, Kant also uses these strengths (overcoming dogmatism) and shortcomings (not providing complete certainty) to negatively set out his own Critical project (the search for and definition of the boundaries of cognition) and, importantly yet curiously, he does this in terms of the persisting spatial metaphor. The complete certainty that he seeks and hopes to establish will constitute a ‘*residence*.’

Kant’s spatial metaphors now seem to be problematically proliferating: the ‘battlefield’ of metaphysics, across which the ‘geographers’ of human reason trace ‘paths,’ upon which the dogmatists build ‘towers,’ and where the ‘nomadic’ skeptics find ‘resting places’ to ‘conduct surveys,’ and, finally, somewhere within Kant hope to locate his own ‘residence.’ Fortunately, in the Introduction to the *Critique of the Power of*

⁸ This ‘dwelling-place’ [*Wohnplatz*] that Kant sees as the final destination or achievement of the paths of human reason recalls the ‘dwelling’ [*Wohnhause*] that was the anticlimactic result of the labors of the Doctrine of Elements. Similarly, the ‘resting-place’ recalls the ‘refuge’ of finding an answer to the problem of induction in the ‘healthy human understanding,’ an explicit reference to Hume that mirrors this characterization (See §3.2). Kant’s proscription on allowing thought to merely ‘rest’ can also be found, albeit this time as a criticism of dogmatism and intellectual intuition, in the 1796 essay *On a Recently Prominent Tone of Superiority in Philosophy*, where he decries how, “things have lately gone so far that an alleged philosophy is openly proclaimed to the public, in which one does not have to *work*, but need only hearken and attend to the oracle within, in order to gain complete possession of all the wisdom to which philosophy aspires” (8: 390). It is this disdain for work found in the dogmatists—the entire essay is a critique of Plato and Platonism—that Kant proclaims and condemns as part of the superior tone and against which he sets the labours and trials of his own Critical philosophy, the “the Herculean labor of self-knowledge from below upwards” (8: 390).

Judgment Kant provides a neat matrix within which some of these spatial metaphors are regulated and their relations ‘mapped out’ (to add another layer) in terms of his wider philosophical system. The section in question reads in full:

Concepts, insofar as they are related to objects, regardless of whether a cognition of the latter is possible or not, have their field [*Feld*], which is determined merely in accordance with the relation which their object has to our faculty of cognition in general. – The part of this field within which cognition is possible for us is a territory [*Boden*] (*territorium*) for these concepts and the requisite faculty of cognition. The part of the territory in which these are legislative is the domain [*Gebiet*] (*ditio*) of these concepts and of the corresponding faculty of cognition. Thus empirical concepts do indeed have their territory in nature, as the set of all objects of sense, but no domain (only their residence [*Aufenthalt*], *domicilium*); because they are, to be sure, lawfully generated, but are not legislative, rather the rules grounded on them are empirical, hence contingent (5: 174).

Kant here provides a hierarchy of different spatial areas that represent the nested structure of possible ways of thinking. The most general and all encompassing possibility of connecting concepts with objects is the *field*.⁹ Within the field is the *territory* of cognition, which is justified knowledge or experience. As *Boden*, or soil as well as territory/terrain, it is at this level that the dogmatists attempt to build those towers—“*Anbau des Bodens*”—that the skeptics abhor and continually tear down in favor of merely resting [*Ruhen*]. At the next level down, the territory is divided into *domains*, where concepts are legislative. Setting aside the qualification that Kant makes here about empirical concepts (although this will soon be important as it qualifies the last division, that of *residence*), in the following paragraph Kant specifies that,

Our cognitive faculty as a whole has two domains, that of the concepts of nature and that of the concept of freedom; for it is *a priori* legislative through both. Philosophy is also divided accordingly into the theoretical and the practical. But the territory on which their domain is established and their legislation **exercised** is always only the set of objects of all possible experience, insofar as they are taken as nothing more than mere appearances; for otherwise no legislation of the understanding with regard to them could be conceived (5: 174).

⁹ This field is not analogous to the ‘battlefield’ of metaphysics; this is evident in the difference in the German between *Feld* and *Kampfplatz*. There is, however, some similarity to the field across which the rivers that have burst their banks run [*querfeldein*] in the metaphor for the transgressions of reason that Kant uses at A783/B811 (see §3.2 footnote 14 above).

These two domains, corresponding to the concepts of nature and freedom, encompass the subject matters of the first two *Critiques*—pure and practical reason, or the “starry heavens above” and “moral law within” as Kant describes the two sources of wonder in the Second *Critique*. The project of the Third *Critique* is to show how these two domains are related. But now the qualification that Kant makes when he first brings up the level of the domain becomes important, and the nature of the *residence* is explained. The residence that Kant alludes to here is concerned with empirical concepts, which can only be applied to nature, but do not themselves have a territory because they are not legislative, that is they are gathered from empirical experience not the structure of reason itself (i.e., the categories). Empirical concepts have a residence in nature, but are not of the territory of nature, which must be described by legislative concepts of cognition (this is, as is explained in §5.2 below, why Kant’s investigation must be transcendental and especially why the Transcendental Deduction is so important, as that section attempts to prove that the categories are legislative for sensibility). However, in specifying that empirical concepts have a residence in nature does not especially help when attempting to ascertain what Kant means by residence in the section from the First *Critique* where he seems to set out the aim of human reason as finding a ‘permanent residence’ on the field of investigation. If anything, this almost offhand aside in the Third *Critique* intensifies the earlier confusion, as the residence of empirical concepts seems closer to the *Ruheplatz* of the skeptics than the *Wohnplatz* that Kant strives for. What it does do, though, is establish the possibility of a residence being found in the *domain* of nature, within the *territory* of cognition, upon the *field* of thought. This alone does not exclude the possibility of the sort of residence that is evoked in the First *Critique*, but does provide hope that such a thing is possible, and suggest that what is necessary for its construction is to learn the lesson of—yet set aside—the empirical concepts (such as those used by Hume) and use instead the legislative concepts of the categories.

The nested structure set out by this section of the Third *Critique* is also very helpful in providing an overall view of the structure of the different spaces and their corresponding elements in thinking that Kant develops. However, it seems that what started as a spatial *metaphor* has now become something more concrete in the actual structures of thought. Appropriately, this more concrete structure can easily be tied back to, and used to explain one of Kant’s most famous spatial metaphors, the ‘island

of truth,' and this in turn will return to Kant's positive project in the First *Critique*, to establish the bounds of sense. Following this trail back to the more general project of the *Critique* also reveals the importance of navigation, firstly as a metaphor and then as something more concrete in terms of orientation (it is this orientation that will prevent Kant merely 'groping' in space) which eventually will lead back to a concrete insight about the nature of extended space itself and its definition as the form of outer sense in the Transcendental Aesthetic. Thus, the examination of the spatial *metaphors* undertaken here shows not only how space erupts (disrupts, ruptures) into Kant's thought even as it is hidden in the form of a metaphor, but how these metaphors also reveal Kant's actual discourse about space and how that space can also be disruptive. It thus, in a sense, uncovers what is concealed in the 'carrying over' of the metaphor and shows how Kant's explicit engagements of space are, within the *Critique*, hidden by the metaphORIZATION of space behind a prioritization of time.

The important distinction or division in considering this is, in the terms of the Third *Critique*, that between the field [*Feld*] and the territory [*Boden*]. That is, the difference between the entire field of the possible concepts in general, and the territory, where the concepts involved are regulated by the boundaries of legitimate objective cognition. In the First *Critique*, Kant is interested in finding these boundaries to the territory of cognition and defining the distinction between objective experience and the illusory transcendental ideas of dogmatism produced by reason as it transgresses these boundaries; but this is not a simple matter of merely finding the internal barrier, it is instead something that must be understood from both sides. In the *Critique of Pure Reason* he sets out these boundaries in relation to their territory and the division between that territory and the field it is within. He writes:

the understanding occupied merely with its empirical use, which does not reflect on the sources of its own cognition, may get along very well, but cannot accomplish one thing, namely, determining itself the boundaries [*Grenzen*] of its use knowing what may lie within and what without its whole sphere [*Sphäre*]; for to this end the deep inquiries that we have undertaken are requisite. But if the understanding cannot distinguish whether certain questions lie within its horizon [*Horizonte*] or not, then it is never sure of its claims and its possession, but must always reckon on many embarrassing corrections when it continually oversteps the boundaries [*Grenzen*] of its territory [*Gebiets*] (as is unavoidable) and loses itself in delusion and deceptions (A238/B297).

This section rearticulates the insights of the Transcendental Dialectic and the argument of the *Critique* in general; but it also makes clear precisely how the spatial terms and structure put forward in the Third *Critique* already operate in the earlier work. As discussed in Chapter 2, above, the understanding, along with sensibility, plays an integral part in the legitimate objective cognition characterized as the synthetic *a priori*, however, it also can, under the influence of the faculty of reason, transgress the boundaries of that legitimate knowledge and chase after the illusory transcendental ideas of self, world and God. The quoted section specifies that the purely empirical use of the understanding in its direct encounters with the world of nature is itself incapable of ascertaining the boundaries of its legitimate use, and as such can easily be led by reason to transgress them. The legitimate use of the understanding and the objective cognition it entails is, in the language of the Third *Critique*, the territory [*Boden*]. Note that in this section, what is translated as ‘territory’ is the German ‘*Gebiets*,’ which in the Third *Critique* was translated as ‘domain.’ What initially appears as either a mistranslation or a discrepancy between Kant’s language in the First and Third *Critiques* can be explained by the fact that the *Critique of Pure Reason* is only concerned with the domain defined as ‘nature,’ which is a subsection of the wider territory that also includes the practical domain of freedom. Hence, for the purposes, and from the perspective of the First *Critique* the territory [*Boden*] that it is concerned with is nothing other than the domain [*Gebiet*] of nature and thus the term *Gebeit* also in this case refers to the subsection of territory that is nature.

The domain of nature set out in the First *Critique* is defined by the legitimate use of the understanding in conjunction with sensibility to produce objective cognition, but beyond this domain lies the wider ‘field,’ and it is onto this field that reason urges the understanding. Kant’s project in the First *Critique* is concerned with finding the boundaries of the domain of nature, but, as he specifies in this section, this cannot be done from within those boundaries alone, and this is why the task of the Dialectic is to carefully follow the path of reason out onto the field in order to determine those boundaries from without as well as from within them. This section also brings about some clarification concerning the problematic issue of residence and its relation to empirical concepts. The residence of empirical concepts must be located on this territory, but is itself not enough to determine the boundaries of the territory, let alone the ‘whole sphere’ that lies without and surrounds that territory beyond its boundaries.

This is actually more like the mere ‘resting place’ that Kant ascribes to skepticism, rather than the residence that he calls for in that later section of the *Critique*. The ‘dwelling-place’ or residence of that later section cannot be arrived at merely through empirical concepts, but instead is a cognition that knows its own boundaries and also knows the dangers of what lies beyond them.

§4.3. *The ‘(Is)land of Truth’*

These ideas of a territory, its boundaries and some field—a ‘sphere’—beyond them can all be read back onto the most famous spatial metaphor that Kant puts forward in the *Critique of Pure Reason*, his evocation of the ‘land of truth,’ or more pertinently, the *island* of truth. The section is found right at the end of the Transcendental Analytic, just before Kant undertakes the truly critical part of the *Critique*, the Transcendental Dialectic, in a chapter titled ‘On the Ground of the Distinction of All Objects in General into Phenomena and Noumena.’ It is worth quoting in full:

We have now not only traveled through the land [*Land*] of pure understanding, and carefully inspected each part of it, but we have also surveyed it, and determined the place [*Stelle*] for each thing in it. But this land is an island, and enclosed in unalterable boundaries [*unveränderliche Grenzen*] by nature itself. It is the land of truth (a charming name), surrounded by a broad and stormy ocean, the true seat of illusion, where many a fog bank and rapidly melting iceberg pretend to be new lands and, ceaselessly deceiving with empty hopes the voyager looking around for new discoveries, entwine him in adventures from which he can never escape and yet also never bring to an end [*Ende*]. But before we venture out on this sea, to search through all its breadth and become certain of whether there is anything to hope for in it, it will be useful first to cast yet another glance at the map of the land that we now leave, and to ask, first, whether we could not be satisfied with what it contains, or even must be satisfied with it out of necessity, if there is no other ground [*Boden*] on which we could build [*anbauen*]; and, second, by what title we occupy even this land, and can hold it securely against all hostile claims. Although we have already adequately answered these questions in the course of the Analytic, a summary overview of their solutions can still strengthen conviction by unifying their various moments in one point (A235/B294).

The metaphor of the island, the land of the understanding, of cognition, of truth, as an *island* reinforces the idea of a boundary that is at work in what is elsewhere referred to as a territory [*Boden*], both from the bounded inside of that territory (on dry land) and in the idea of something (an ocean) beyond those boundaries. What was elsewhere referred to as a ‘field [*Feld*]’ is not only the dry land of that charmingly named island,

but also the now-revealed treacherous ocean, where, as Kant will go on to show in the Dialectic, nothing can be grounded and nothing can be built. It is only on the island that many of the other various metaphorical actions that Kant has referred to can take place: cultivating the soil, building towers or residences or raiding those buildings, resting, surveying, fighting battles or tracing nomadic paths, etc. But his interest now turns to leaving this island, and setting out onto the treacherous ocean beyond it, and this requires a different set of cartographic skills. It is the task of the Transcendental Dialectic to venture out onto this ocean, but this is not only to show the nature of the illusions produced by the icebergs out on those stormy seas, but because it is only by traveling on the sea that the full nature of the boundaries of the territory of cognition can be discovered. The necessity and nature of this venture can be found in another use Kant makes of the nautical metaphor, this time in the *Prolegomena*, where he writes of how,

Hume ... deposited his ship on the beach (of skepticism) for safekeeping, where it could then lie and rot, whereas it is important to me to give it a pilot, who, provided with complete sea-charts and a compass, might safely navigate the ship wherever seems good to him, following sound principles of the helmsman's art drawn from a knowledge of the globe [*Globus*] (4: 262).¹⁰

¹⁰ In this case the metaphor is not entirely Kant's alone. In the conclusion of Book 1 of the *Treatise of Human Nature* (1738) in a section (Part IV, Section VII) that foreshadows both Kant's description in the *Prolegomena* and the 'island of truth' in the *Critique*, Hume himself puts forward this image when he writes:

But before I launch out into those immense depths of philosophy ... Methinks I am like a man, who having struck on many shoals, and having narrowly escaped shipwreck in passing a small frith, has yet the temerity to put out to sea in the same leaky weather-beaten vessel, and even carries his ambition so far as to think of compassing the globe under these disadvantageous circumstances (2008, 195).

These concluding passages from the *Treatise* were first translated into German in 1771 by Johann Georg Hamann, but published anonymously (and unattributed) in the *Königsberger gelehrte Zeit* with the title 'Night Thoughts of a Skeptic' [*Nachtgedanken eines Skeptikers*] (Kuehn 2001, 198). It is worth noting, however, that the nautical metaphor can also be found in works by Kant that pre-date the 1771 translation of Hume's *Treatise*. In the *Physical Monadology* of 1756 Kant writes:

However, hardly any mortal can advance with firm step along the straight line of truth without here and there turning aside in one direction or another. For this reason there have been some who have observed this law to such a degree, in searching out truth, they have not ventured to commit themselves to the deep sea but have considered it better to hug the coast, only admitting what is immediately revealed by the testimony of the senses (1: 475).

The image of the ‘shipwrecked’ Hume, abandoning the ship of speculation and clinging to dry land recalls the image of the skeptic who seeks a ‘resting-place’ and thus cannot fully comprehend the territory upon which he rests. In a sense, the boundaries of that territory remain undiscovered because without a ship a circumnavigation of the island is impossible.¹¹ These two sections both point to the direction that Kant will have to take as he ventures out onto the ocean beyond the sure ground of the territory of cognition. They also elaborate (and pre-empt) what he hopes to find there, and also the tools necessary for this task and through which Kant pursues it.

What is at issue on this ‘ocean’ is navigation, as Kant puts it, the “sound principles of the helmsman’s art drawn from a knowledge of the globe.” Interpreting this metaphor in terms the division of field and territory from the Third *Critique* (5: 174, outlined in §4.2 above), it becomes obvious that this must necessarily be a different sort of knowledge than that which was obtained while standing on the territory set out within the boundaries of cognition—on the ‘firm land’ of the ‘island of truth.’ It is not of the same order of knowledge as that of cognition, produced by the synthesis of sensibility and the understanding, instead it is concerned with the use of reason beyond those bounds (in or on the field/sea, so to speak); and it is through this ‘knowledge’ of the field, that those very bounds of the territory of cognition will be known, that the island of truth will not just be mapped and surveyed from within, but circumnavigated from without as well.¹² Thus the tools for navigation, for the sort of knowledge gained out on the sea, will be different to those of cognition. Fortunately, Kant in putting forward

A passage that aptly applies to Hume just as much as the later direct reference in the *Prolegomena*. This suggests that Kant may well have been somewhat aware of the language of the *Treatise* well before it was translated into German.

¹¹ As Kant puts it later in the *Critique*, “he [the skeptic] merely **limits** [*einschränkt*] our understanding without drawing **boundaries** [*begrenzen*] for it” (A767/B795); this distinction between limit and boundary is discussed in § 4.5 below. The skeptics, left without either ship or dwelling and constantly having to move from any resting-place they find, thus have little choice but to become the nomads that Kant describes them as in the A-Edition Preface.

¹² It is perhaps something like the ‘denied knowledge’ that allows Kant to ‘make room’ for faith. The room is still there and the room is known but it permits no *things* (objects) to be known within it, there are only illusions and icebergs pretending to be things.

the metaphor of the helmsman's art in terms of 'knowledge of the *globe*' has already provided a hint about what can be known of this field and how it can be known.

Kant's evocation of the importance of knowledge of the globe as an important element of the voyage into the sea beyond the island of truth makes one sort of sense within the terms of the metaphor, that knowledge of the empirical state of the globe as a map of the earth would be very useful for navigating the oceans of the Earth (getting from A to B, avoiding reefs or dragons, etc.); but it can also be read in a slightly more abstract way to mean that it is knowledge of the globe—the Earth upon which the sailing is done—as a globe (the geometrical shape of a sphere or ball) that is important and not the mere empirical details of the actual geography of the Earth. The metaphor can be interpreted on at least these two levels and as a metaphor all of these levels 'carry across' and are important insofar as they make possible other interpretations and connections. This interpretation, of the importance of knowledge of the globe as knowledge about the spherical nature of the Earth, is important because it can be connected with another spatial mechanism that Kant uses, namely the geometrical ability to know the dimensions and unity of any sphere from a smaller region of its surface, which in turn reveals something about the fundamental spatial metaphor at the heart of Kant's project, i.e., the bounds of sense and the wider bounds of reason, which now, through these various layers of metaphor can be contrasted with (and importantly, thus seen to be different to) the idea of a limit.

§4.4. The 'Sphere' of Reason and Knowledge of the Globe

In the *Critique of Pure Reason*, Kant uses the globular nature of the Earth to elucidate the distinction between boundaries and limits, but this discussion of the Earth as a sphere or ball can also be read in tandem with the *Prolegomena*'s emphasis on the 'knowledge of the globe' and by extension the navigation of the ocean beyond the land of truth. The section in the *Critique* reads:

If I represent the surface of the earth (in accordance with sensible appearance) as a plate [*Teller*], I cannot know how far it extends. But experience teaches me this: that wherever I go, I always see a space [*Raum*] around me in which I could proceed farther; thus I cognize the limits [*Schranken*] of my actual knowledge of the earth at any time, but not the boundaries

[*Grenzen*] of all possible description of the earth. But if I have gotten as far as knowing that the earth is a sphere [*Kugel*] and its surface the surface of a sphere [*Kugelfläche*], then from a small part of the latter, e.g., from the magnitude of one degree, I can cognize its diameter and, by means of this, the complete boundary [*völlig Begrenzung*], i.e., surface of the earth, determinately and in accordance with *a priori* principles; and although I am ignorant in regard to the objects that this surface might contain, I am not ignorant in regard to the magnitude and limits [*Schranken*] of the domain [*Umfanges*] that contain them (A759B787).¹³

There are several important elements in this section.¹⁴ Firstly, it provides an insight into the aforementioned distinction between limits [*Schranken*] and boundaries [*Grenzen*], an issue that has already cropped up several times in this thesis and will be examined in detail in the next section (§4.5). It must be noted, however, that as much as it elaborates this distinction this section also muddies it with the conflation of the two in the last sentence. Secondly, and more importantly for the issue of the navigation of the globe in question here, it puts forward the geometrical assertion that once part of the surface curvature of a globe/ball, such as the face of the Earth, is known, then the entirety and unity of that globe can also be determined. It is this unity and totality of the globe that that provides the muddied limit of the possibility of any travel upon that surface of the globe—out on the ‘ocean’ that surrounds the ‘island of truth.’ The vital point gleaned from the argument presented in this section and the geometrical

¹³ Kant often uses the word *Sphäre* (in English translations ‘sphere’), in the more general sense that can mean an area of interest or a milieu in question (to complicate matters with two more spatial references). He speaks of, among other things, the “sphere of objects” (A254/B309, A479/B507); “sphere of a/the concept” (B113, A655/B683); “sphere of cognition” (A260); “sphere of possible experience” (A229/B281); “sphere of understanding” (A305/B362) or “our understanding” (A593/B621); “sphere of intuitive cognitions” (A471/B499); “sphere of a general concept” (A577/B605); and, in a confusion of various spatial terms and metaphors of “the domain [*Umfang*] outside of the sphere of appearances” (A255/B310). However, in the section under consideration here, when Kant asserts that the earth is a ‘sphere’ he has a stricter geometrical sense in mind. This is obvious in the German where the word is not *Sphäre* but *Kugel*, which is more aptly translated as ‘ball’ (and the related *Kugelfläche*, translated as ‘spherical surface’ but perhaps more aptly ‘ball-like surface’). Hence, it would be amiss, even with the most metaphorical subtleties, to attempt to carry over the details of this technical argument concerning the geometrical properties of a sphere/ball to each and every of the varied uses of the term sphere [*Sphäre*] in general. Of course, inversely, this does not mean that every time that Kant uses *Sphäre* he is denying the geometrical sense of sphere, sometimes, especially when he contrasts it with a plane [*Ebene*] or plate [*Teller*], as in the quote in question here. Another such case, from A762/B790, will be discussed below and a hint can be seen in the quote from A238/B297 discussed above. The word translated as ‘globe’ in the *Prolegomena* is the Latinate *Globus*, which safely avoids the generalities of ‘sphere’ [*Sphäre*], but maintains the property of being a *Kugelfläche*—‘ball-like surface.’

¹⁴ The importance of this passage and its connection to ‘Kant’s Geography of Reason’ is developed in the paper of that title by Malpas and Thiel (2011).

proposition that it relies upon, is that it is not necessary to have traversed and surveyed the entirety of that globe in order to ascertain that limit, it can be determined from knowledge of merely a small section of the globe and an application of the rules of geometry. Kant is thus already one step ahead of the ‘shipwrecked’ and ‘resting’ Hume. Even if he does not know what might be out there upon the foggy ocean he does already know that it is not a “boundless ocean” as Hume described it in the *Treatise* (2008, 195 quoted in footnote 10 above; although Hume does also refer to the “globe,” he does not make the same geometrical insight as Kant). Kant already has some ‘knowledge of the globe’ from the knowledge that it is a globe and from the area that he has already surveyed. This capacity to know the total extent and unity of the surface, if not the contents of that surface, is made clear by the contrast Kant draws between what would happen if the surface of the Earth were a plate instead of a sphere. In the case of a plate, there are still limits to the extent of what can be perceived from any point on that plate, but neither those limits nor what can be perceived or measured within them provides any knowledge of the full surface of that plate, as is the case with a spherical surface.

This geometrical possibility now can be applied back to Kant’s aim to navigate the ‘ocean’ beyond the boundaries of the security of the ‘island of truth’ through the ‘knowledge of the globe.’ Even if there are no things to know out on this ocean, and the shapes that emerge like other islands are only ever the ‘illusions’ produced by ‘icebergs’ or ‘fogbanks’ (i.e., the ‘objects’ of the transcendental ideas examined in Chapter 2 above) then something can still be known of or about the ocean. Specifically, that it is a unity and that there are certain limits to its extension, determined by its ball-like shape. Importantly, the whole of the ocean does not have to be explicitly surveyed to come to this conclusion, its very structure, determined from a mere part, defines those limits.

The unity of the globe can also be interpreted in conjunction with how the arguments of the Dialectic lead to the unity sought for by the illusory injunctions of reason as it strives towards the transcendental ideas. As argued in Chapter 2 above, this unity, in the forms of the regulative ideas and the *focus imaginarius*, plays an important role in providing an aim for the empirical and scientific investigation of the natural world, even if that aim is ultimately illusory and unobtainable. Kant even references the ball-like shape of the Earth in the Appendix to the Transcendental Dialectic, specifically

with reference to God as a regulative idea (A687/B715). Here Kant discusses the use of the idea of God as a supreme intelligence behind the world as something useful and regulative for considering the whole world ‘as if’ it has a systematic unity. Kant claims that if the shape of the world is considered as if it were a result of a world-author “then in this way we can make a lot of useful discoveries.” In this context Kant gestures towards the “advantage” of the Earth’s “spherical shape [*kugelige*]” and specifically the slight flattening of this sphere and how the bulge at the equator helps maintain the position of the Earth’s axis by preventing the Earth from becoming unbalanced due to changes on its surface such as the creation of mountains by earthquakes or volcanoes.¹⁵ He also points out how this bulge was naturally created when the Earth was in an earlier fluid state. This particular reference to the ball-like shape of the Earth is not explicitly concerned with the issues of navigation of the globe that are the main focus here, but it does at least provide an indirect link between the unity of the globe and the unity provided by the regulative ideas, even with their illusory and oceanic nature taken into account.¹⁶

¹⁵ One of Kant’s very early essays, *The Question, Whether the Earth is Ageing, Considered from a Physical Point of View* (1754), was concerned with the shape and rotation of the Earth, and specifically the issue slowing of its rotation due to the gravitational influence of the moon on the tides (for more on this essay and its role in the development of Kant’s thought see Schönfeld 2000, 80-4).

¹⁶ There is an interesting aside to this section in the *Critique* in relation to Kant’s deep commitment to Newtonian universal gravitation. It is the centrifugal force of the rotation of the Earth that causes this ‘bulging out’ at the equator; and it is this same force that explains the fact that all of the planets of the solar system orbit the sun on the same disclike-plane rather than at different, random angles. Kant was the first to offer this solution in the ill-fated 1755 book *Universal Natural History and Theory of the Heavens* (1: 264-6, ill-fated because the publisher went bankrupt and then the warehouse burnt down before the books were distributed). This was a problem that Newton himself could not solve and instead postulated the interference of the hand of God to ensure such harmonious workings (on this issue see Schönfeld (2000) page 105 for the problem as Newton saw it, and page 113 for Kant’s solution). Of course, Kant’s cosmology in *Universal Natural History* and the *Nebularhypothese* that he proposes there, which explains the formation of the universe purely through the mechanics of attraction and repulsion, was proved largely correct by subsequent scientific developments—first Laplace and then C. F. v. Weizsäcker and J. G. Kuiper in 1944 (Schönfeld, 114). Working purely theoretically Kant postulated that the Milky Way is also disclike and rotating around a center of gravity just like the solar system, and that many of what we take to be single stars are in fact further galaxies seen from immense distances (Schönfeld, 116). This early cosmological work finds Kant thinking explicitly about the nature of spheres and planes in light of the mechanical forces of the universe, it also sees him stretching out his thought well beyond the bounds of the Earth and into the immeasurable times and distances of the cosmos and its creation—an obsession with the ‘starry heavens above’ that would stay with him throughout his entire life and philosophy. These more

Connecting the unity of the ball-like shape of the Earth back to the regulative ideas produced by reason as it leads the understanding beyond its legitimate bounds—off the solid land of the island of truth and onto the ocean with its illusory icebergs—shows how the nautical and navigational metaphor elucidates something about the nature of reason itself. This is a link that Kant makes explicit a few pages after his discussion of the ball-like shape [*Kugelfläche*] of the Earth. He writes:

Our reason is not like an indeterminably extended plane [*Ebene*], the limits [*Schranken*] of which one can cognize only in general, but rather must be compared with a sphere [*Sphäre*], the radius of which can be found out from the curvature of an arc on its surface (from the nature of synthetic *a priori* propositions), from which content and boundary [*Begrenzung*] can also be ascertained with certainty. Outside the sphere [*Sphäre*] (field of experience [*Feld der Erfahrung*]) nothing is an object for it (A762/B790).

The metaphor here comes full circle (curiously for a metaphor, somewhat literally given the geometrical properties in question here). The discussion has left behind the metaphors of the Earth, the ocean and islands, and now addresses reason itself, which is directly described as sharing the geometrical properties of a ball whereby its totality can be established from the knowledge of only a small section of its surface.

Furthermore, this section specifies that the totality of that surface corresponds to the ‘field [*Feld*]’ that in the Third *Critique* describes the area of all possible conception, including the pretensions of unbounded reason, and within which the sub-sections of the territory and its domains must be located, like the island within the ocean.

However, this section also leaves room open for something further beyond that field, another ‘outside’ that can only correspond to the ‘outer space’ beyond the surface of the Earth. Kant does not say much about this ‘outside’ as at the present it remains only a tantalizing prospect of something, or perhaps more pertinently a ‘*nothing*,’ that is still necessary as a context for *everything* that is within it, just as at the end of the Dialectic everything falls away and the unity of reason is left floating in space, confronted with its true abyss.

cosmological issues and their relation to the role of space within the Critical philosophy are addressed in more detail in §5.7.1 below with regard to the later (1786) *Metaphysical Foundations of Natural Science*.

Setting aside the enigmatic ‘outer space’ that lies beyond both the surface of the Earth and the unity of reason, the vital point is that reason and the field of experience are ultimately navigable, that they have boundaries and that these boundaries can be known. Knowledge is not wandering freely and directionlessly across a plane the bounds of which are unknown, metaphysics is not merely ‘groping’ to use the image that Kant evokes in the B-Preface. Navigation is possible and the Critical philosophy is the geography of reason.

§4.5. *Limits and Bounds*

Before discussing this possibility of navigation, something must be said about the distinction between limits [*Schranken*] and boundaries [*Grenzen*] that runs through many of the quoted sections of the *Critique*; as this distinction will clarify some of the obscurities already encountered.¹⁷ Kant expands on this distinction in the *Prolegomena* in a section (§57) that, with obvious influence from the parts of the *Critique* discussed above, is titled ‘On Determining the Boundary of Pure Reason [*Beschluß von der Grenzbestimmung der reinen Vernunft*]’ He first sets out the need for a “painstaking critique [*sorgfältige Kritik*]” in order to “guard the boundaries [*Grenzen*] of our reason, even with respect to its empirical use, and set a limit to its pretensions [*und ihren Anmaßungen ihr Ziel setze*]” (4: 351, the use of ‘limit’ in this translation is slightly problematic as it disrupts the emphasis placed on Kant’s distinction between boundaries (*Grenzen*) and limits (*Schranken*), the word used here, *Ziel*, is better translated as destination, goal or aim, which recalls the *focus imaginarius* of the transcendental ideas, but the construction *ein Ziel setzen* does have the meaning of setting a limit for something).

The two levels of boundaries of reason set here correspond to those already set out, the territory of the island of truth (the empirical use) and to the boundary of the globe (the wider ‘goal’ [*Ziel*] of the pretensions of reason). Although this boundary is further complicated because the unity of the globe of reason in the form of the regulative ideas

¹⁷ This discussion of the difference between *Schranke* and *Grenze* draws on work done by Jeff Malpas and Karsten Thiel (2011), as well as Pamela Sue Anderson (2012)

is somewhat at odds with the aim that reason gives naturally and unavoidably itself, namely, to find the transcendent entities of soul, world and God as things in themselves and not as mere transcendental and regulative ideas. It is precisely because of this wider pretention of reason that Kant argues that these boundaries, or the actual Critical goal of reason, need to be determined and guarded, in order to prevent our principles of reason becoming transcendent and thus pretending to be “universal conditions of things in themselves” (4: 351). This is the speculative ‘goal’ that reason, left to its own devices, attempts to pursue; it is the drive to be “compelled, regardless of all prohibition against losing [oneself] in transcendent ideas, ... to look for peace and satisfaction beyond all concepts that [one] can justify through experience” (4: 353). In other words, this goal prompts the desire to set off onto the ocean, beyond the bounds of justified experience that is the territory of the island of truth.

This discussion in the *Prolegomena* recalls the section of the *Critique* quoted above in §2.3.3.1, where Kant explicitly sets out the pretensions of reason as attempting to produce transcendent principles, and, importantly for the present distinction between boundaries and limits, he describes this transcendence of reason in terms of the transgression and tearing down of boundary posts and the attempt to establish a new territory:

We will call the principles whose application stays wholly and completely within the limits [*Schranken*] of possible experience **immanent**, but those that would fly beyond these boundaries [*Grenzen*] **transcendent** principles. By the latter I do not understand the **transcendental** use or misuse of categories, which is merely a mistake of the faculty of judgment when not properly checked by criticism, and thus does not attend to the boundaries of the territory [*Grenze des Bodens*] in which alone the pure understanding is allowed to play; rather, I mean principles that actually incite us to tear down all those boundary posts [*Grenzpfähle*] and lay claim to a wholly new territory [*Boden*] that recognized no demarcations anywhere (A295-6/B352).¹⁸

¹⁸ There is a prefiguration of this emphasis on boundaries and their transgression in the deeply skeptical 1766 *Dreams of a Spirit-Seer, Elucidated by Dreams of Metaphysics*. As Kant criticizes both the mystic Emmanuel Swedenborg and dogmatic metaphysicians, he writes that, “The realm of shades [*Schattenreich*] is the paradise of fantastical visionaries. Here they find a country without frontiers [*ein unbegrenztes Land*] which they can cultivate at their pleasure” (2: 317), or, as he puts it later in the essay “*build castles in the sky*” (2: 342). In contrast, Kant asserts that, “metaphysics is a science of the *boundaries* [*Grenzen*] of human reason” (2: 368, translation modified, in the Cambridge Edition David Walford does not differentiate between boundaries and limits). He then, in a rehearsal of the metaphors that appear as the island of truth in the *Critique*, notes that, “A small country [*kleines Land*] always has a long frontier [*viel Grenze*]; it is hence, in general, more important for it to be thoroughly acquainted with its possessions than blindly [*blindlings*] to launch on campaigns of conquest.” (2:368, note the

The analysis of the Dialectic and the insights gained through the labours of the Critical philosophy guard against the seductiveness of the pretensions of reason and aim to secure the boundaries of the ‘land of truth’ and the legitimate objective cognition that it represents (in the insular metaphor or otherwise as an island requires no ‘boundary posts’). Part of this is an identification of the limits of reason itself as a sphere, as the globe that holds the ocean beyond the island, and as the unity of the transcendental regulative ideas that replace the transcendent objects that reason alone aims to reveal. Kant, however, is very particular about all of these levels and distinctions between the boundaries and limits of cognition and reason, of islands and globes, and of pretensions or goals of reason.

Central to the set of distinctions that Kant makes is that between boundaries [*Grenzen*] and limits [*Schranken*] and §57 of the *Prolegomena* goes on to explain the difference between the two. Kant asserts:

Boundaries [*Grenzen*] (in extended things) always presuppose a space [*Raum*] that is found outside a certain fixed location [*Platz*], and that encloses that location; limits [*Schranken*] require nothing of the kind, but are mere negations that affect a magnitude insofar as it does not possess absolute completeness (4: 352)

And elaborates a few pages later, stating that,

in all boundaries there is something positive (e.g., a surface is the boundary of corporeal space [*körperlichen Raumes*], yet is nonetheless itself a space [*Raum*]; a line is a space, which is the boundary [*Grenze*] of a surface; a point is the boundary of a line, yet is nonetheless a locus in space [*Ort im Raume*]), whereas limits [*Schranken*] contain mere negations (4: 354).

metaphor of blindness again, now applied to the transgression of boundaries). To protect these boundaries against dogmatic or mystical transgressions, philosophy needs to “have knowledge not only of objects themselves but also their relation to the human understanding” and in doing so, in a sort of proto-version of the Critical philosophy, “its frontiers [*Grenzen*] will contract in size and its boundary-stones [*Marksteine*] will be securely fixed. And those boundary-stones will never again permit enquiry to leave the realm which is its home, and cross the boundary to range abroad again [*welche die Nachforschung aus eigentümlichen Bezirke niemals mehr ausschweifen lassen*]” (2: 369-70, the German does not so much refer to ‘home’ as to the ‘own proper region’ [*eigentümlichen Bezirke*] which introduces another spatial term not included in the formalization of the Third *Critique*, but equivalent to what is there called ‘territory [*Boden*]’).

Put simply, a boundary must always have a beyond; it is a demarcation in a wider space within which it can be drawn.¹⁹ In contrast a limit is not interested in the beyond, it is itself merely a negation of any such beyond. This distinction now clarifies some of the earlier assertions and arguments that Kant has made. Firstly, the allegation that the skeptic “merely **limits** [*einschränkt*] our understanding without drawing **boundaries** [*begrenzen*] for it” (A767/B795), can now be set alongside the image of Hume as resting ‘shipwrecked on the beach of skepticism’ and unwilling to set out on the ‘open sea.’ For Hume the secure land of the island is a limit not a boundary, he does not attempt to sail out onto that sea, he simply negates the possibility of finding anything useful out there or even the usefulness of attempting to do so; furthermore, in seeing the sea as ‘boundless’ he only sees a limit, leaving the totality unknown. For Kant, however, the coastline is a boundary that can be crossed and indeed must be crossed in order to establish the precise nature of its bounds from both sides, this is the work performed by the Dialectic, which examines the demands of reason as well as the illusory transcendent objects it seeks, and also reconfigures those objects into the regulative ideas, which provide a unity of at least the ‘as if.’

Kant elaborates on the necessity of knowing the boundary of objective cognition from both sides and how reason in its transgression of this boundary functions both within objective cognition and beyond its boundaries. In §59 of the *Prolegomena*, he writes:

That which is to set its boundary must lie completely outside it, and this is the field [*Feld*] of pure intelligible beings. For us, however, as far as concerns the *determination* of the nature of these intelligible beings, this is an empty space [*leerer Raum*], and to that extent, if dogmatically determined concepts are intended, we cannot go beyond the field [*Feld*] of possible experience. But since a boundary is itself something positive, which belongs as much to what is within it as to the space lying outside a given totality, reason therefore, merely by expanding up to this boundary, partakes of a real, positive cognition, provided that it does not try to go out beyond the boundary, since there it finds an empty space [*leeren Raum*] before it, in which it can indeed think the forms to things, but no things themselves. But *setting the boundary* to the field of experience through something that is otherwise unknown to it is indeed a cognition that is still left to reason from this standpoint, whereby reason is neither locked inside the sensible world nor adrift outside it, but, as befits knowledge of a boundary, restricts itself solely to the relation of what lies outside the boundary to what is contained within (4: 360-1).

¹⁹ This necessity of a wider space, recalls without actually being, Strawson’s argument that space can act as an abiding framework within which determinations and comparisons can be made.

This section emphasizes that it is precisely because reason can traverse the boundary of objective cognition that knowledge of that boundary is possible through the relation of the outside and the inside. This is in contradiction to one of Strawson's fundamental disagreements with Kant. Strawson states that "In order to set limits to coherent thinking, it is not necessary, as Kant, in spite of his disclaimers attempted to do, to think both sides of those limits. It is enough to think up to them" (44, while Strawson uses the word 'limits' here, given all the work done so far to distinguish limit from boundary, and furthermore that Strawson's own book is titled *The Bounds of Sense*, it is better to read this section thinking that Strawson is talking about the bounds [*Grenzen*] of 'coherent thinking' rather than their limits [*Schranken*]). Strawson does nonetheless concede that, "No philosopher in any book has come nearer to achieving this strenuous aim [thinking the bounds of experience] than Kant himself in the *Critique of Pure Reason*" (44).²⁰ This section from the *Prolegomena* also complicates the straightforward terminology of the Third *Critique* (which, it must be remembered, was not established when the *Prolegomena* was written). It refers to the 'field' twice, the 'field of pure intelligible beings [*Feld der reinen Verstandeswesen*],' which is the sense of field used in the third *Critique*; and the 'field of possible experience [*Feld möglicher Erfahrung*],' which is the domain of objective cognition/experience (Kant uses a similar phrase at the already-quoted A762/B790). While the terminology is not yet set and 'field' is not the technical term it will later become, Kant still makes a spatial distinction between possible objective experience, its boundaries and the space outside of them where reason is irresistibly drawn.²¹

²⁰ It also complicates Badiou's image of Kant as the inventor of finitude and as a 'watchman' who prohibits any transgression of the boundaries of cognition (see 1.2 footnote 3 above). For Kant is deeply concerned with finding out what is beyond those boundaries or out on the sea (to combine the metaphors), indeed such finding out is necessary for the upkeep of such a boundary, for keeping the 'boundary stones' maintained rather than 'tearing them down' in a speculative frenzy.

²¹ The important distinction between limits and bounds does, however, persist in the Third *Critique* and its distinction of field, territory and domain. Kant observes that the two domains of nature and freedom "are inevitably limited [*einschränken*]" (5: 175). He goes on, however, to also identify that:

There is thus an unbounded [*unbegrenztes*] but also inaccessible field [*Feld*] for our faculty of cognition as a whole, namely the field of the supersensible [*Feld des Übersinnlichen*], in which we find no territory [*Boden*] for ourselves, and thus cannot have on it a domain for theoretical

The distinction of *Grenzen* and *Schranken* also elaborates the difference between the limitation of the horizon as it appears on a flat plate or plane and that of the boundaries that can be determined when the same horizon is known to be on a globe or ball. Some care is required here because the comparison is not direct and is further complicated by the use of the term ‘horizon.’ On the plate the horizon is the limit, but if the plate extends indeterminately (as Kant puts it), then no knowledge of the potential boundaries of the plate can ever be drawn from that limit. This does not mean that there can be no movement on the plate, and this is where another, unstated, feature of limits comes to light. For if movement is possible, and the limits of the horizon also move appropriately, they are not necessarily fixed; but in this movement and movability they cannot be crossed.²² On the globe, the horizon still functions as a limit to what can be seen, but from within that horizon there is enough information to draw conclusions about the constraints and possibilities of all possible movement on that surface, the totality of the globe, its radius, diameter, area and surface can all be known through geometry.

That totality and unity of the globe, i.e., of the field of pure intelligibility created and traversed by reason, is now also problematized by the details of the distinction between limits and boundaries. Or more specifically Kant’s earlier equivocation between the two at A759/B787 must be addressed. Is the unity of the globe and the totality of its surface a boundary or a limit for reason? Despite that earlier equivocation there is evidence in sections of the *Critique* and *Prolegomena* for the argument that reason itself has a boundary and thus there must be a beyond to that boundary that is integral to knowing it. The first bit of evidence for this assertion is the metaphor of the sphere or ball that Kant applies to reason at A762/B790. Like the line in space that he evokes

cognition either for the concepts of the understanding or for those of reason, a field that we must certainly occupy with ideas for the sake of the theoretical as well as the practical use of reason, but for which, in relation to the laws from the concept of freedom, we can provide nothing but a practical reality, through which, accordingly, our theoretical cognition is not in the least extended to the supersensible (5: 175, translation modified).

Kant may describe the unbounded field of the supersensible as inaccessible, but it is only inaccessible to cognition or knowledge in the technical Critical sense, it can still be traversed and navigated by the understanding under the influence of reason, but will only ever encounter transcendental illusions, which are nonetheless revealed, and used, as such by the Critical philosophy in terms of the *focus imaginarius* and the ‘as if’ structure.

²² Pamela Sue Anderson (2012) focuses especially on this aspect of limits.

as a description of a boundary in the *Prolegomena* (4: 354), a sphere also requires a wider space to provide the context within which it is determined. Indeed, in the passage from the *Critique* Kant explicitly asserts that the boundary [*Begrenzung*] of the sphere of reason can be “ascertained with certainty.”²³ Similarly, following the metaphor of the globe further, the Earth also rests within a wider space, that of the ‘starry heavens’ that filled Kant with such wonder, an airless cosmic abyss that corresponds to the ‘true abyss of reason’ that Kant confronts at the end of the Dialectic. This abyssal and empty ‘outer space’ is not all that clear. For while the relation between cognition and reason, between the island and the ocean (and the globe) is extensively explored and intuitively graspable in its metaphor, the space beyond the surface of the globe, beyond the boundaries of the regulative ideas, is in its very emptiness, much more opaque and obscure. This abyss is addressed later (see §§5.7-5.8 below), but first the examination of the spatial metaphors and systems as they are present on the surface of the globe and within the bounds of cognition and reason, and how the boundaries of reason are themselves central to this task, must be completed.

On the surface of the globe, even out on the high sea with only the bare horizon and no landmarks in sight, navigation is still possible; and it is in this possibility of navigation, and especially of *orientation* that something important about Kant’s conception of space, and indeed the importance of space for Kant, becomes apparent. Back in the First *Critique* just after the second-quoted highlighting of the geometrical importance of knowing the whole of a globe, and thus its boundaries, from only a small section of its surface (A762/B790), Kant posits a counterfactual that brings to light how knowing boundaries is important for reason in terms of synthetic *a priori*

²³ He makes a similar statement in §57 of the *Prolegomena*:

we noted limits [*Schranken*] of reason with respect to all cognition of mere beings of thought; now, since the transcendental ideas nevertheless make the progression up to these limits necessary for us, and have therefore led us, as it were, up to the contiguity of the filled space [*vollen Raumes*] (of experience) with empty space [*leeren*] (of which we can know nothing – the *noumena*), we can also determine the boundaries [*Grenzen*] of pure reason (4: 354).

While Kant unambiguously states here that we can move from knowing merely the limits of reason to knowing the *boundaries* of reason, and thus also that there are such boundaries, this also includes the implication that there is something beyond those boundaries. He cryptically hints that this beyond is ‘empty space,’ which he also associates with the noumena. This cryptic evocation of empty space and assess its relation to the noumenon is discussed in the next Chapter.

judgments. He postulates that, “If we has insight into their origin and authenticity, then we would be able to determine the domain [*Umfang*] and the boundaries of reason; but until this happened, all assertions of the latter are shots in the dark [*blindlings gewagt*]” (A762-3/B790-1). These ‘shots in the dark’ (literally, ‘blind daring’) that occur without the determination of the bounds of reason recall the “mere groping [*herumtappen*] ... among mere concepts” (Bxv) that the B-Preface decries of the current state of the ‘battlefield’ of metaphysics. The image of darkness is not unfamiliar to Kant, in the A-Preface Kant gives his very first characterization of the problems of reason, and the forthcoming criticism of dogmatic metaphysics, very specifically in terms of darkness. There he writes of how human reason, as it extends beyond its legitimate use, “falls into darkness [*Dunkelheit*] and contradictions” (Aviii, translation modified).²⁴ But Kant explicitly confronts the issue of ‘groping in the dark’ (to combine the two metaphors) in an essay from 1786 called *What Does it Mean to Orient Oneself in Thinking?* which reveals a whole host of details of Kant’s thinking about space (in terms of both geographical metaphors and as extension) and especially the issue and possibility of navigation.²⁵ 1786 is the same year as Kant returns to his interest in Newtonian dynamics and the issue of absolute spatiality in the *Metaphysical*

²⁴ Instead of “darkness” Guyer and Wood use the word “obscurity”, but the German *Dunkelheit* is just as appropriately, and much more evocatively, rendered as “darkness” as Werner Pluhar and Norman Kemp Smith translate it and as is followed here. A *Reflexionen* from sometime around 1776-78 also combines the metaphors of darkness and cartography, Kant writes of “The mathematician, the beautiful spirit, the natural philosopher: what are they doing when they make arrogant jokes about metaphysics[?] In them lies the voice that always calls them to make an attempt in the field of metaphysics.” This is a voice that will reappear in the Third *Critique* as the voice of reason brought on by the sublime (5: 254); but the *Reflexionen* continues,

With the first judgment that he makes about this he is in the territory [*Gebiet*] of metaphysics. Now will he here give himself over entirely, without any guidance, to the convictions that may grow upon him, although he has no map of the field [*Feldes*] through which he is to stride[?] In this darkness [*Dunkelheit*] the critique of reason lights a torch, although it does not illuminate the regions unknown to us beyond the sensible world, but the dark space of our own understanding (18: 93; R5112).

By the time of the *Critique of Pure Reason* this dark space has shifted from the understanding to the further division of the faculty of reason, but in the progress of transcendental illusion it is reason that leads the understanding beyond its legitimate bounds and into that darkness beyond the sensible world.

²⁵ O’Neill discusses the connection between this essay and Kant’s political geography (2011), and also in relation to Kant’s wider philosophical project (1989). Similarly, Malpas and Zöllner (2012) elaborate the relation between Kant’s literal and metaphorical concepts of space and his treatment of empirical geography.

Foundations of Natural Science, and only a year before the appearance of the B-Edition of the *Critique of Pure Reason*, which has a much more extreme and explicit emphasis on the importance of space as, in Strawson's words, an 'abiding framework' that makes objective experience possible and confirms the existence of the external world. The shift between the A- and B-Editions of the *Critique* is explicitly addressed in the next Chapter (in §5.2) alongside the *Metaphysical Foundations* (in §5.7.1), but first the *Orientation in Thinking* essay is here examined in order to develop some of Kant's thinking about space (and the importance of space for Kant's thinking) as it occurs outside the intricate and specific details of the Critical system. These developments are important for the eventual discussion of not only the Critical system and its treatment of space and time, but also for understanding how this treatment changes between the two Editions of the *Critique*, a change that is then shown to depend upon the 1786 direct re-engagement with space.

§4.6. Orientation: From Thinking to Space

The *Orientation in Thinking* essay is Kant's intervention in a particular debate between Moses Mendelssohn and F.H. Jacobi about the question of Lessing's Spinozism and the wider debate about philosophical enthusiasm [*Schwärmerei*] in general.²⁶

Orientation, through the sort of Critical philosophy that Kant has put forward in the *Critique*, is necessary when attempting to engage with the supersensible through the use of pure reason; the danger that the use of orientation can avoid is enthusiasm. As Kant writes later in the essay, "arguing dogmatically with pure reason in the field [*Felde*] of the supersensible is the direct path to philosophical enthusiasm [*Schwärmerei*], and only a critique of this same faculty of reasons can fundamentally remedy this ill" (8: 138). Here Kant uses the spatial term 'field' [*Felde*] to describe the supersensible, foreshadowing its technical use in the Third *Critique*, where it refers to all possible and attempted connection of concepts and 'objects,' even if those 'objects'

²⁶ For a detailed account and analysis of the 'pantheism controversy' around Lessing's supposed Spinozism see Beiser (1987, Chapters 2, 3 & 4). For more on the wider debate about philosophical enthusiasm, the need for reason to lead into dogmatic faith, see Chapter 2 of Toscano (2010).

are not guaranteed by the senses, i.e., are supersensible. In another essay, *On a Recently Prominent Tone of Superiority in Philosophy* from 1796, which also addresses the issue of enthusiasm (and in particular that of Plato), Kant asserts that “to look into the sun (the supersensible) without becoming blind is impossible” (8: 399). The reference to the sun here refers to the Platonic metaphor of the sun for the Form of the Good, that which is beyond being and thus only knowable by reason in contrast to the shadowy images of the sensible world. Kant’s reversal of Platonism has already been addressed (in terms of the shift from the Platonic ‘realm of ideas’ to Kant’s ‘transcendental ideas’ in §2.3.3.2), but here, through taking the metaphor of the sun somewhat literally, he argues that the realm of the supersensible is one characterized by blindness and thus darkness where only groping is possible. Kant also refers, once again in *Orientation in Thinking*, to this sort of thinking that operates through reason alone and beyond the secure ground of cognition as “speculative thinking” (8: 139), which clarifies Meillassoux’s use of the term ‘speculative,’ as Meillassoux attempts to argue for knowledge of the world directly through reason i.e., dogmatically (albeit with some almost-Critical reformulations of reason as unreason). In this sense the evocation of the field beyond the domain of cognition reinforces the notion that this field of the supersensible is that ocean beyond the boundary of the island of truth. But, as with the ‘knowledge of the globe,’ this ocean will also have boundaries, and it is these boundaries and the means to navigate within them that must be determined in order to avoid enthusiasm. As this section—a footnote—of the essay continues and concludes: “For with what right will anyone prohibit reason – once it has, by its own admission, achieved success in this field [*Felde*] – from going still farther in? And where then is the boundary [*Grenze*] at which it must stop?” (8: 138). These questions are, of course, rhetorical, for Kant has already answered them with the *Critique of Pure Reason*.

The issue of enthusiasm and the question of rational theology addressed in the *Orientation in Thinking* essay places this discussion directly in the ‘dark and shadowy realm’ beyond the senses and out on the ‘foggy ocean of illusion.’ Kant now chooses to discuss these issues explicitly through the idea of ‘orientation’ and in doing so he draws a direct parallel between the regular question of orientation in space and the ‘extended’ concept of orienting oneself in thinking, which advances the metaphor of the possibility of orienting oneself out on the ocean of thinking, beyond the bounds of

justified cognition. Kant outlines this wider use of orientation as such: “The extended and more precisely determined concept of *orienting oneself* can be helpful to us in presenting distinctly the maxims healthy reason uses in working on its cognitions of supersensible objects” (8: 134). As the concern here is with supersensible objects, that is, beyond the domain of legitimate cognition—the synthesis of sensibility and understanding—and on the ocean beyond the island of truth, then sensibility is of no help in the issue of orientation. Before getting to the relation that this issue of orientation has to ‘groping in the dark’ Kant first uses an example that is directly connected to cartography and navigation.

In the proper meaning of the word, to *orient oneself* means to use a given direction (when we divide the horizon into four of them) in order to find the others – literally, to find the *sunrise*. Now if I see the sun in the sky and know it is now midday, then I know how to find south, west, north, and east. For this, however, I also need the feeling [*Gefühl*] of the difference in my own subject, namely the difference between my right and left hands (8: 134-5).

Real orientation on the globe of the Earth, against the bare horizon, even if it is divided into the four directions, requires not only a point of reference (in this case the sun, not as Plato’s supersensible but as another star in the heavens), but also the subjective feeling of the difference between left and right, and this difference is not one that can be found through any sensible means. As the section continues, “I call this a *feeling* because these two sides outwardly display no designatable difference in intuition” (8: 136). There are two important points here, firstly the subjective and inner feeling required for orientation, and secondly a reiteration of the extension beyond the sensible by reason and a suggestion as to what can be (or cannot be) found there. It is these two points that Kant carries over from the metaphor of directional orientation to the issue of thinking in general. He writes:

By analogy, one can easily guess that it will be a concern of pure reason to guide its use when it wants to leave familiar objects (of experience) behind, extending itself beyond all the bounds [*Grenzen*] of experience and finding no object of intuition at all, but merely space [*bloß Raum*] for intuition; for it is then no longer in a position to bring its judgments under a determinate maxim according to objective grounds of cognition but solely to bring its judgments under a determinate maxim according to a subjective ground of differentiation in the determination of its own faculty of judgment (8: 136).

Here Kant translates by analogy the subjective feeling of the differentiation of left and right into some sort of differentiation that is applicable to the determinations of judgments. Ultimately, this subjective feeling will be that of practical reason and the moral law, which is concerned with the domain of freedom and also guarantees the presupposition of the existence of God (8: 139). The details of this ‘moral law within’ that is the subjective ground for the differentiation and determination of judgments and the condition of the possibility of orientation in thinking is not so much a concern for the present thesis as the metaphors of space, and eventually the way in which they relate to and reveal something about the thinking of actual space and spatiality in all of Kant’s thought. In this case, what is of interest is what Kant finds ‘beyond all the bounds of experience,’ where there can be no objects of intuition—this is why a subjective feeling is necessary—but rather “*merely space* for intuition.” This is a persistence of space beyond to the bounds of experience and into the field of reason and possibly beyond into ‘outer space.’ This ‘mere’ or ‘empty’ or ‘outer’ space (even extra-terrestrial to push the metaphor of the globe) is evoked by Kant once again a couple pages further into the *Orientation* essay, where, once again, he is discussing the need for a subjective feeling to orient oneself in thinking and what exactly this place of orientation is. He writes:

But now there enters *the right* of reason’s *need*, as a subjective ground for presupposing and assuming something which reason may not presume to know through objective grounds; and consequently for *orienting* itself in thinking, solely through reason’s own need, in that immeasurable space of the supersensible, which for us is filled with dark night [*im unermeßlichen und für uns mit dicker Nacht erfüllten Raume des Übersinnlichen*] (8: 137).

This section puts this place of orientation, now as that of the supersensible, once again in terms of space [*Raume*], but this time instead of ‘mere,’ ‘empty’ or ‘outer,’ it is ‘immeasurable.’ However, this time the space is also ‘filled,’ and filled explicitly with ‘dark night’ (although, it must be noted that the German is not exactly ‘dark night’ but is rather ‘thick [*dicker*] night,’ but nights are nonetheless dark and even more so when they are thick).²⁷ Considered alone this conjuration of the dark/thick night could be

²⁷ In a *Reflexionen* from circa 1783-84, in the context of considering theology and the idea of the most perfect being, Kant also reflects upon the dark space of night, he writes of how, “Shadows are all that is left over from the infinite nothingness, namely night, which without

written off as poetic hyperbole, but it echoes the image of dogmatic metaphysics as potentially (i.e., without orientation or critique) ‘groping’ or ‘shots in the dark’ (or ‘groping in the dark’ to combine the two) that were evoked in the *Critique of Pure Reason*. It also comes only a couple of pages after Kant has explicitly brought up the metaphor of a dark room to elucidate mathematical orientation.

In this example of the dark room, Kant is once again addressing the idea that orientation can take place without the use of the senses, and in this case he is interested in the understanding of spatiality in a more abstract mathematical sense than in the first geographical example of navigation. To develop his point he brings up the image of orienting oneself in a dark room, without any visual (where vision stands in for all sensibility) ‘landmark’ and only through ‘groping.’ He writes:

In the dark [*Finstern*] I orient myself in a room that is familiar to me if I can take hold of even one single object whose position I remember. But it is plain that nothing helps me here except the faculty for determining position according to a *subjective* ground of differentiation: for I do not see at all the objects whose place I am to find; and if someone as a joke had moved all the objects around so that what was previously on the right was now on the left, I would be quite unable to find anything in a room whose walls were otherwise wholly identical. But I can soon orient myself through the mere feeling [*bloße Gefühl*] of a difference between my two sides, the right and left (8: 135).

It is again the (subjective) feeling of the difference between the left and right hands that is important for orientation; but in this case it is not this feeling that is so significant for developing the argument about the importance of space for Kant’s thought, rather it is the example that he gives here and its specific details that are noteworthy.

In this example, that which has elsewhere been presented as a metaphor—‘groping in the dark’—is now examined in a literal sense. The center of the argument is that in such a dark room, one which is familiar and the arrangement of its contents are known, once a single point of reference has been found the rest of the room can be oriented around it through the feeling of the difference between left and right. The indispensability and power of this difference is brought out by the hypothetical

the all-illuminating sun would fill space” (18: 494; R6206). This affords a certain amount of primacy to both space and darkness over the usually emphasized importance of the sun (i.e., Plato).

situation Kant envisages, where some prankster has rearranged the items in the room so that they are set out in a perfect mirror image of their familiar positions. In such a case the objective spatial relations between the objects—angle and distance—are the same as when they are in their familiar positions, but despite this similarity the person entering the room would be thoroughly disoriented because their own orientation takes place precisely through the differentiation of left and right and not by mere conceptual knowledge of the distances and angles between objects.²⁸ While in this essay Kant is using the issue of spatial orientation to get at the analogous issue of orientation in speculative thought, in both cases through an ‘inner feeling’ (difference between right and left in space and the moral law in reason), this example in fact also reveals something important about Kant’s thinking about space and spatiality in general. The example of the prank of the reversed furniture in the dark room (and of the miracle of the mirroring of the constellations in the heavens) is a case of a wider issue that is central to Kant’s theory of spatiality, that of ‘incongruent counterparts,’ and is one that he addresses in an earlier pre-Critical essay from 1768 called *Concerning the Ultimate Ground of the Differentiation of Directions in Space*.

§4.7. The Explicit Themmatization of Space in the Pre-Critical period

Coming to this earlier essay through the lens of the later *Orientation* essay, the answer to the question it suggests in its title is already known: the ground for the differentiation of directions in space is the subjective feeling of the difference between the left and the right (hands). When it is considered from the perspective of an attempt

²⁸ Kant provides a similar example immediately before this where he is considering orientation in relation to the arrangement of constellations in the night sky and the division of the horizon into the four directions using the stars. He writes:

Thus even with all the objective data of the sky, I orient myself *geographically* only through a *subjective* ground of differentiation; and if all the constellations, though keeping the same shape and position relative to one another, were one day by miracle to be reversed in their direction, so that what was east now became west, no human eye would notice the slightest alteration on the next bright starlit night, and even the astronomer – if he pays attention only to what he sees and not at the same time what to what he feels – would inevitably become *disoriented* (8: 135).

Here it is the furniture of the heavens that is reversed rather than merely that of a single room, but the effect of disorientation is the same.

to chart the course of the development of Kant's thought, however, this turn inwards, the attempt to ground something that *prima facie* is concerned with objective and external things in space (directions, not objects) on an inner or subjective feeling, represents an important step in the development of his transcendental philosophy, as this inner feeling shows the ideality of space and eventually is fully thought out as an *a priori* form of sensibility. Thus, it is argued that this examination of space and spatiality is from the very start (or before the start, *pre-Critical*) an essential and important element of Kant's thought and one which persists through all the metaphors and metaphysics set out above.

In the *Directions in Space* essay Kant re-iterates (or perhaps pre-iterates is a better term, given the essay is written much earlier) how "the distinct feeling [*Gefühl*] of the left and the right side is of such great necessity for judging directions" (2: 380). However, while this determination of directions is a key element of the essay, and indeed the avowed target of the essay given its title, Kant is actually attempting to prove a much more general thesis about the nature of space. His aim is to assert that space is absolute rather than merely relational, or, as he puts it: "to see whether there is not to be found in intuitive judgments about extension, such as to be found in geometry, clear proof that: *Absolute space, independent of the existence of all matter and as itself the ultimate foundation of the possibility of the compound character of matter, has a reality of its own*" (2: 378).²⁹ Whether Kant actually achieves this aim is debatable, but what is more important, given the role it will play in his later philosophy, as evidenced by the *Orientation* essay, is the central role of directionality in space or spatiality. Kant argues that directionality is an essential element of space and as such, it shows that space must be absolute and sensible and not merely the conceptual set of relations between things. In arguing specifically *against* the idea of

²⁹ Absolute space is, of course, a central underpinning of Newton's method and his mechanics. This essay can thus be seen in line with Kant's continuous attempts to provide a metaphysics for Newtonian physics. Newton makes the distinction between absolute and relative space, and argues for the priority of the former, in the *Principia Mathematica*, where he writes: "Absolute space, of its own nature without reference to anything external, always remains homogeneous and immovable. Relative space is any movable measure or dimension of this absolute space" (1999, 408-409). As Kant will also argue, Newton's conception of absolute space does not preclude relations in space, but only asserts the primacy of the space in which those relations can be found or determined. See also Buroker 1981, Chapter 1. The difference and relation between absolute and relative space is an important part of Kant's *Metaphysical Foundations of Natural Science*, discussed in Chapter 5 below.

relational space Kant is arguing against Leibniz and his *analysis situs*, which put forward such a relational account of space (see De Risi 2007).

In arguing against Leibniz, the *Directions in Space* essay can be considered another step in Kant's slow rejection of dogmatism. Jill Vance Buroker puts forward such an argument in her book *Space and Incongruence* (1981). Buroker argues that Leibniz's metaphysics of space is intrinsically connected to the centrality of the principle of sufficient reason and the identity of indiscernibles (26), which preclude the homogeneity (indiscernibility and thus identity) of different sections of absolute space. This leads Leibniz to assert that only objects (as indistinct perceptions of monads) exist, and that space is only the relation between those objects. Furthermore, Buroker also argues that in early works such as *On the True Estimation of Living Forces* (1747), the *New Elucidation* and the *Physical Monadology*, Kant also maintained a relational theory of space, which he did not abandon until the 1768 essay on *Directions in Space* (40-50). These two lines of argument supply further support for the argument set out in Chapters 2 and 3 above, that Kant gradually gave up his own dogmatism over the course of the pre-Critical period. The abandonment of the rationalist relational theory of space also occurs around 1768, immediately before the 'great light' of 1769 and the preliminary approach to the Critical philosophy in the *Inaugural Dissertation*.³⁰ Indeed, Buroker also argues that within the *Directions in Space* essay and the rejection of the Leibnizian relational theory of space, Kant also breaks with Leibnizian epistemology that considers sensibility merely as impoverished intellection. As Buroker puts it, "if Kant were right that incongruent counterparts show that space has its own nature independently of what it contains, they also show that the experience of sensory objects cannot be constructed from perceptions ['intellections' or 'conceptions' is a better word] of completely independent monads as the Leibnizians claimed" (67, she also elaborates on this argument in Chapter 4). Such an insight into the total differentiation of sensibility and intellection is, of course, key to the Critical system that Kant will develop, and also the main feature of the 'great light' of 1769. In §2.3.2 above, it was argued that the discovery of the Antinomies precipitates this 'great light' and the insight into the separation of sensibility and

³⁰ Robert Hanna explicitly connects the *Directions in Space* essay to the 'great light' of 1769 and claims that it "effectively prepares the ground for the theory of space, time, and sensibility which Kant first worked out in his *Inaugural Dissertation*" (167).

understanding. The argument presented here in terms of the importance of Kant's considerations of space does not invalidate this earlier point, as the Antinomies themselves, and especially the first two, are closely concerned with issues of space and time and the nature of the world and thus the two elements are closely connected. As such, the details of this progression of Kant's thought supports the argument that the short essay on *Directions in Space* was pivotal in Kant's (and thus philosophy's) transcendental turn, not only in the direct shift to investigating the conditions of possibility of cognition and experience, but in some of the details, systems and distinctions that investigation produces.

The anti-Leibnizian argument that Kant makes for getting from directionality to absolute space in the *Directions in Space Essay* is fairly straightforward. He actually, as is a common strategy for Kant, starts from the position that he is arguing against,³¹ in this case the idea of relationality in space; he writes that “the positions of parts of space in reference to each other presuppose the direction in which they are ordered in such a relation,” showing that relationality itself requires directionality. The second step is to show that this directionality cannot be accounted for by relations alone, he continues: “In the most abstract sense of the term, direction does not consist in the reference of one thing in space to another—that is really the concept of position—but in the relation of the system of these positions to the absolute space of the universe.” This is because, as Kant concludes, “The direction, however, in which this order of parts is oriented, refers to the space outside the thing. To be specific: it refers not to places in the space – for that would be the same thing as regarding the position of the parts of the thing in question in an external relation – but rather to universal space as a unity, of which every extension must be regarded a part” (2: 377-8).³² Kant thus thinks

³¹ See, for example, the critique of the principle of sufficient reason in the *New Elucidation* or the Refutation of Idealism in the *Critique of Pure Reason*.

³² Edward Casey, in *The Fate of Place*, argues that this essay, and this section of it in particular, constitutes a key moment in Kant's reduction of place to first position and then to point. This represents one side of a “double extremism” in Kant (which, for Casey, is indicative of the “crushing monolith of space in the modern era” (203)) where place is reduced to either point, on the one hand; or empty homogenous space, on the other (191). However, as Casey notes in the following chapter, this essay with its emphasis on the embodied (handed) source of the difference in directions, also provides a starting point for a “way into place” via the body (203). Along this ‘way’ Casey observes that “It is doubtless true that the essay of 1768 exhibits the ‘essentially subjectivist nature [of orientation],’ and thus foreshadows the emphasis on the transcendental subject in the later Critical philosophy of Kant” (207). With

that by showing that directionality, which by its nature must refer to something outside the thing in question, is an essential component of space, he can show that space is this wider framework that allows such an outside. To do this, he must first explain directionality and hence answer the main question of the essay.

The answer (the feeling of the right and the left) has already been set out by the examination of the *Orientation* essay, and already seems to be in conflict with Kant's aim; how can the absolute space of the outside actually be determined by an inner feeling? Ultimately, this seeming-conflict will result in something akin to Kant's awakening transcendental philosophy, but before developing this, the connections and parallels between this essay and the later *Orientation* essay must be set out. Kant uses two of the same examples that he will later use in the *Orientation* essay to emphasize the importance and indispensability of directionality. Firstly, the cardinal compass points, which "No matter how well I may know the order of the compass points, I can only determine directions by reference to them if I know whether this order runs from right to left, or from left to right." And, secondly, he also gives the example of the heavens, although this time in a more simple cartographic form:

the most precise map of the heavens, if it did not, in addition to specifying the position of the stars relative to each other, also specify the direction by reference to the position of the chart relative to my hands, would not enable me, no matter how precisely I had it in mind, to infer from a known direction, for example, the north, on which side of the horizon I ought to expect the sun to rise (2: 379).

This example of sidereal orientation, while still dependent on the distinction between the left and the right, does not contain the later elaboration of the miraculous reversal of the constellations, but that issue of mirrored pairs is, in the form of his discussion of incongruent counterparts, Kant's main argument for the directionality of space and that

some reservations about what exactly is the relation between the transcendental philosophy that Kant develops and the role of the subject and/or the body in that philosophy, this thesis argues for the same 'foreshadowing' role of this essay. The fact that Casey can hold up this same essay as both a reduction of *and* a way into place, suggests that there is some sort of tension in Kant's treatment of space and spatiality, which, while at this point remaining unclear, still indicates that space and spatiality play an important (if disruptive) role in Kant's thought. It is this suggestion, this conflicted 'way,' that this thesis is following.

this directionality is grounded on an inner feeling of the difference between left and right.

The examples of the possible miraculous reversal of the heavens or the mischievous rearrangement of the dark room in the *Orientation* essay serve to show how the distinction between left and right is necessary, but in the earlier *Directions in Space* essay similar examples are provided in order to show not only the necessity of directionality and its inner determination, but also the inadequacy of the relational conceptions of space. The main, purely geometrical example that Kant uses to introduce incongruent counterparts is that of a “spherical triangle [*sphärischer Triangel*]”, which “can be exactly equal and similar to another such triangle, and yet still not coincide with it” (2: 381).³³ However, it is the human body and the hands in particular that Kant claims is “the most common and clearest example” (2: 381). These examples of incongruent counterparts disprove the relational theory of space because if they are only considered through each of their internal relations, the angles and distances between their various parts, then they are identical, and yet no amount of turning and trying will get them to fit perfectly into each other. As Kant says, “the shape of one body [he is talking about human hands here] may be perfectly similar to the shape of the other, and the magnitudes of their extensions may be exactly equal, and yet there may remain an inner difference between the two, this difference consisting in the fact, namely, that the surface which encloses the one cannot possibly enclose the other” (2: 282). The examples of incongruent counterparts easily dismisses the purely relational theory of space (which is different than the mere possibility of there being relations in space), but it does not necessarily follow simply from that dismissal that space must be absolute, nor is it clear how the absoluteness of space relates to directionality.

³³ The example of incongruent counterparts also works with mirrored triangles on a flat plane, which as long as they are confined to that plane can never coincide with one another. However, those flat triangles could be made to coincide if they were rotated through a third dimension, i.e., if the plane was folded upon itself. The specification of ‘spherical triangles,’ which already include a third dimension, precludes the solution of merely using that third dimension (although, not, perhaps, a fourth dimension as Wittgenstein postulates in the *Tractatus Logico-Philosophicus* (6.36111)). This example also shows that Kant was already thinking about the geometry of the globe alongside his early thoughts on orientation and navigation.

At issue in these questions is the nature of the ‘inner difference’ that Kant refers to and its connection with the determination of direction and absolute space. Kant undoubtedly connects this ‘inner difference’ to a specifically *embodied* experience of space at several points in the essay; suggesting that “the ultimate ground, on the basis of which we form our concept of directions in space, derives from the relation of these intersecting planes to our bodies” (2: 379), or how “Such knowledge would be of no use to us unless we could also orient the things thus ordered ... by referring them to the sides of our body” (2: 379-80), or that the ‘feeling’ of left and right is because “nature has established an immediate connection between this feeling and the mechanical organization of the human body” (2: 380). All of this would suggest an almost proto-phenomenological emphasis on embodiment, but when Kant presents his conclusions of this discussion (and when he attempts to connect directionality to absolute space) he backs away from such a corporal conclusion.

Instead he asserts that these differences in the body are themselves due to its own constitution in absolute space. He writes, “Our considerations, therefore, make it clear that differences, and true differences at that, can be found in the constitution of bodies; these differences relate exclusively to *absolute* and *original space* [*absoluten und ursprünglichen Raum*], for it is only in virtue of absolute and original space that the relation of physical things to each other is possible” (2: 383). Kant does not end his conclusions here, he goes on to draw out the importance of the ‘innerness’ of the ‘feeling’ of directionality as something that reveals the nature of this ‘absolute space.’ He continues, “Finally, our considerations make the following point clear: absolute space is not an object of outer sensation; it is rather a fundamental concept [*Grundbegriff*] which first of all makes possible outer sensation” (2: 383). This conception of absolute space is something quite unlike how space is usually considered. Namely, this space is not something ‘out there’ in which objects are located, but instead, following the insight that direction relies on an ‘*inner feeling*,’ space is now that which makes possible such outer sensation, not the objects of that sensation, nor their locations. Such a conception of space is very much like that which Kant will present, first in the *Inaugural Dissertation* and then again in the *Critique of Pure Reason*, where space is one of the *a priori* forms of sensibility—“the pure form of all outer intuitions” (A34/B50)—rather than the actual thing perceived by that

sensibility.³⁴ The *Directions in Space* essay even has the form of language that Kant will later use to describe the shift involved in transcendental philosophy. Space, and absolute space is, in this formulation ‘that which makes possible,’ a form of words which pre-empts the important foundational shift of the *Critique*, where Kant states that “I call all cognition **transcendental** that is occupied not so much with objects but rather with our *a priori* concepts of objects in general. A system of such concepts would be called transcendental philosophy” (A11/B25). Although the full system with the two forms of sensibility, space *and* time, (and the ‘second stem’ of knowledge: understanding; and beyond that the problematic faculty of reason) are not yet set out in the form that they will be in the *Critique*, one of the important shifts that will make possible that later ‘Critical’ or ‘transcendental’ philosophy has already taken place. However, along with this shift, some of the problems that will play out more fully in the *Critique* also begin to appear in a simpler form.

Intuitively, it does not take much analysis to see the tension between space as the form, or fundamental concept, that makes possible *outer* sensations and its determination as an *inner* feeling. This reveals one of the ‘four great dualities’ that Strawson found in the Transcendental Aesthetic, namely that of the inner and the outer. This distinction does not yet have the full form that it will take in the Aesthetic, with time as the form of inner sense and space as the form of outer sense, but it does already contain, in its tension, here within space alone and thus more pertinently, a conflict that will play out in the *Critique* in terms of the necessity of space (outer) to determine time (inner) that is itself the locus of all possible sensation and cognition—the “*a priori* formal condition of all appearances in general” (A34/B50). Indeed, the tension that is all the more obvious in the *Directions in Space* essay is at the heart of the division between the inner and the outer in the developing Critical philosophy, first in the *Inaugural*

³⁴ The *Inaugural Dissertation* will repeat this argument in a similar form to show that space is subjective and ideal, even referring to “spherical triangles” (2: 403). The example of incongruent counterparts will, however, drop out of the account of the ideality of space in the *Critique of Pure Reason*. There it is the apodictic science of geometry that is used to prove the ideality and *a priori* nature of space (see §5.1.1 below). It does, however, reappear in the *Prolegomena* in §13, 4: 286-7. In the *Critique*, in addition to his positive arguments for the ideality of space as the form of outer sense, Kant also argues explicitly against both the relative and absolute theories of space put forward by Leibniz and Newton respectively (A39-40/B56-7). The absolute theory of space, however, is of central importance for Kant’s *Metaphysical Foundations of Natural Science* from 1786, which is discussed in §5.7.1 below.

Dissertation and then in the *Critique of Pure Reason*. Thus, in the next section this tension or duality and the way it develops from the arguments about absolute space through to the division of inner and outer in terms of time and space is used as a way to briefly set up and anticipate the fuller analysis of the properly Critical philosophy in the next Chapter.

§4.8. Towards the Critical Philosophy: The Division of the Inner and the Outer

The *Inaugural Dissertation* of 1770 contains many elements that will be expanded and elaborated upon in the *Critique of Pure Reason* 11 years later. Chapter 2 above, examined the analysis of the elenctic and dogmatic forms of reason contained in the earlier work, and argued that they were preliminary examinations of the arguments that make up the Dialectic in the later one. This section now turns to the earlier part of the *Inaugural Dissertation* where Kant deals with the aspects of the sensible world, namely time and space, and argues that this work and the criticisms of it that Kant received from Moses Mendelssohn and Johann Heinrich Lambert shortly after its publication play a mediating role between the earlier *Directions in Space* essay with its focus on space, and the following Transcendental Aesthetic of the *Critique of Pure Reason*, with its complex interrelation of space and time as outer and inner sense.

Kant's consideration of time and space in the *Inaugural Dissertation* is very similar to that of the *Critique*. In the *Inaugural Dissertation* he presents a series of parallel arguments about time and space, which all lead up to his fundamental argument, that they are the two formal principles of the sensible world (2: 402 for time and 2: 405 for space). The propositions that Kant puts forward to lead to this insight are: [1] that time and space are both presupposed by the objects of sense, not arising or abstracted from them; [2] that the idea or concept of each time and space are singular; [3] that they are pure intuitions; that they are continuous magnitudes (although, while Kant makes an explicit argument for this in the case of time, he says that for space "it is easy" and hence that he "shall pass over it" (2: 403)); [4] that neither time nor space are objective and real, but rather only ideal; and, [5] that they are both conditions of objects of the senses, specifically *external* objects in the case of space (4: 398-405). Within these

propositions Kant presents the argument from incongruent counterparts in order to support his assertion that space is a pure intuition (2: 403). He uses incongruent counterparts, in the familiar forms of the human hands and spherical triangles, to argue that there cannot be a purely conceptual (relational) account of space and that incongruity, and thus spatiality, can only be grasped through intuition. He concludes: “It is, therefore, clear that in these cases the difference, namely, the incongruity, can only be apprehended by a certain pure intuition” (2: 403). The aim and result of the argument from incongruent counterparts has changed slightly from its earlier version in the *Directions* essay. It is no longer used to argue explicitly for absolute space, but rather to argue that space is a pure intuition, an outcome that resulted from but was not explicitly stated in the earlier essay. In this shift in the use of the argument from incongruent counterparts we can see the result of the ‘great light’ of 1769 and the separation of sensibility and understanding that it entailed, which itself was perhaps in part prompted by the arguments of the *Directions* essay. Returning to the *Inaugural Dissertation*, Kant goes on to argue that even the propositions of pure geometry, which presents itself as purely conceptual, can only function by “placing it [an object of geometry] before the eyes by means of a singular intuition, as happens in the case of what is sensitive” (2: 403).³⁵ Kant presents no parallel argument for his assertion that time is a pure intuition, but instead grounds it on the two preceding steps: that time must be presupposed by the sense and does not itself arise from them, and that it is singular and not general. In the *Critique* the argument from incongruent counterparts disappears and Kant relies solely upon the apodictic science of geometry and its necessarily sensible apprehension to argue for space as a form of intuition. The asymmetry between space and time in the arguments of the *Inaugural Dissertation* does, nonetheless, carry over into the *Critique*, as there is no apodictic science of time, in the same way that geometry is of space, which Kant can rely upon as he examines time as a pure intuition. As the *Inaugural Dissertation* and the earlier *Directions in Space* show, however, the argument from incongruent counterparts is an earlier, and perhaps more primary (at least in Kant’s development), argument for space specifically as pure intuition and thus for the separation of sensibility from the understanding.

³⁵ He also regards and rejects both Newton’s and Leibniz’s particular accounts of space, albeit while still endorsing a form of absolute space, but the absolute as a transcendently ideal form of intuition.

Consequently, there seems to be an asymmetry in the accounts of space and time in the *Inaugural Dissertation* that, on this account, ascribes a certain level of importance or primacy to space in Kant's development. Any seeming priority of space in the *Inaugural Dissertation* is tempered, however, by the fact that even in this work he explicitly asserts the priority of time in a manner similar to how he will do so in the *Critique* (see §1.5 above for a preliminary account of this priority and §§5.1 and 5.2.1 below for a fuller account). In the Corollary to his discussion of time and space in Section 3 of the *Inaugural Dissertation* Kant writes: "Time ... more nearly approaches a universal and rational concept, for it embraces in its relations absolutely all things, namely space itself and, in addition, the accidents which are not included in the relations of space, such as thought of the mind" (2: 405). Although ultimately this priority of time will play out in the *Critique*, as shown in the next Chapter, at this stage it only accentuates the asymmetry between the emphasis on space in Kant's earlier arguments and the priority of time in his arguments about them together. This disjunction only becomes more prominent in the responses of Lambert and Mendelssohn to the *Inaugural Dissertation*.

Significantly, neither of these responses is concerned with the details about priority examined above, but both of them make the same objection to Kant's treatment of space and time. They both take issue with Kant's assertion that time is not something objective and real and both give the same counter argument. Lambert, who responded to the publication of the *Inaugural Dissertation* first, in a letter to Kant dated October 13, 1770, argues that:

All changes are bound to time and are inconceivable without time. *If changes are real, then time is real*, whatever it may be. *If time is unreal, then no change can be real*. I think, though, that even an idealist must grant at least that changes really exist and occur in his representations, for example, their beginning and ending. Thus time cannot be regarded as something *unreal* (10: 107).

Mendelssohn's objection, set out in a letter to Kant dated December 25, 1770, is almost exactly the same. It reads:

For several reasons I cannot convince myself that time is something merely subjective. Succession is after all at least a necessary condition of the representations that finite minds have. But finite minds are not only subjects; they are also objects of representations, both those

of God and those of their fellows. Consequently it is necessary to regard succession as something objective (10: 115).

Both counter arguments commence from the same observation, that even the representations or intuitions that a subject has must themselves be something temporal, and that temporality cannot be merely a condition supplied by those subjects, therefore time must be real and objective. Kant responds to these objections, or at least to Lambert's—insofar as he only mentions him by name—in the same famous letter of February 21, 1772 to Marcus Herz where he sets out the problems and thought that will eventually become the *Critique of Pure Reason* nine years later. In that letter, Kant names the objection of Lambert “the most serious objection that can be raised against the system” and one that “seems to occur naturally to everybody.” Kant's response to this objection starts not from a consideration of time itself, but from his recognition that the same objection is not made against space despite the parallel claim in the *Inaugural Dissertation* that it is also not something objective and real. After summarizing Lambert's objection, he notes that:

Then I asked myself: Why does one not accept the following parallel argument? Bodies are real (according to the testimony of outer sense). Now, bodies are possible only under the condition of space; therefore space is something objective and real that inheres in the things in themselves. The reason lies in the fact that it is obvious, in regard to outer things, that one cannot infer the reality of the object from the reality of the representation, but in the case of inner sense the thinking or the existence of the thought and the existence of my own self are one and the same thing. The key to this difficulty lies herein. There is no doubt that I should not think my own state under the form of time and that therefore the form of inner sensibility does not give me the appearance of alterations. Now I do not deny that alterations have reality any more than I deny that bodies have reality, though all I mean by that is that something real corresponds to the appearance. I cannot even say that the inner appearance changes, for how would I observe this change if it did not appear to my inner sense? If someone should say that it follows from this that everything in the world is objective and in itself unchangeable, then I would reply: Things are neither changeable nor unchangeable (10: 134).

He then goes on to quote Baumgarten on how what is impossible cannot be considered under any conditions, and concludes that, “similarly here, the things of the world are objectively or in themselves neither in one and the same state at different times nor in different states, for thus understood they are not represented in time at all.” This long section contains not only Kant's response to Lambert's (and Mendelssohn's) objection to the ideality of time, but also many of the tropes and details that are also present in

the Critical philosophy, including, importantly, the distinction and tension between inner and outer sense. It thus requires a detailed examination.

Kant starts from the hypothetical argument for the reality of space that would be a parallel to Lambert's argument for the reality of time. This argument asserts the reality of space due to the reality of bodies in space that appear through perception. The advantage of this parallel argument is that it emphasizes the difference between the reality of the appearance and the reality of things in themselves, or in the untechnical pre-Critical terms of the letter, between representations and objects (the terminology of 'objects' will have a restricted sense of 'objects of appearance (or cognition)' in the *Critique*), a distinction that will become all-important in the Critical philosophy. The insight that Kant takes from this distinction is that the reality of things in themselves cannot be taken or postulated from the reality of appearances, which is immediately obvious for space in the disjunction between the innerness of the appearances and the outerness of the objects. This introduces another important distinction of the Critical philosophy, that between inner and outer, including the association of the outer with the representation of space. Kant's aim in bringing up this illegitimate parallel is, however, to make clear how the same distinction between appearances and things in themselves is also at work in the case of time, although it is hidden by the fact that temporal appearances are inner and the disjunction involved in the outerness of space is less obvious. The 'thing' or 'object' of temporal appearances is the same as the subject in which they appear, and it thus seems that this subject should itself be temporal (as Mendelssohn's form of the objection makes clear). Kant's counter argument for time then runs the same as for space, the reality of things in themselves—in this case of the subject in which appearances change over time—cannot be ascertained from appearances—any changes that appear to the subject. Kant then elucidates on this in a way that is telling for the tensions of inner sense that run through the *Critique*. The sentence in question runs: "I cannot even say that the inner appearance changes, for how would I observe this change if it did not appear to my inner sense?" As such, in the necessity of some sort of sense to even say that appearances change, they themselves are only ever appearances and as such cannot be used to ascertain or posit anything about the things in themselves. Kant then presents his solution to the objection of Lambert and Mendelssohn and states that it does not follow that the ideality of time means that the 'world' (in itself) is unchangeable, but

rather that the concept and/or actuality of changeability (or unchangeability) simply is not applicable to such objects in themselves as they are not ‘in time’ at all.

Within this solution, there is the hint of the important relation between time and inner sense, that develops in the *Critique* into the claim of the Aesthetic that time is the form of inner sense, which, in turn is ‘amplified’ throughout the *Critique*, in the form of the time-determination discussed in Chapter 3 above, so that time becomes the most obvious central issue of the transcendental philosophy. This letter shows that, in addition to its more general outlining of the forthcoming Critical philosophy (discussed in §3.1 above), the reason why Kant, in shifting from the *Dissertation* to the *Critique*, places such an emphasis on time, inner sense and apperception. It is in responding to the objections of Lambert and Mendelssohn that this nexus of interrelated issues comes to the fore. This pushing forward also comes, as Kant implies, at the cost of ignoring space; and in his Critical examination of them, Kant, despite the implications of the letter, also neglects space in at least the A-Edition of the *Critique*. The argument of the next Chapter examines this neglect of space and how it nonetheless still functions within Kant’s thought as a disruptive element, an examination of which in turn reveals the centrality of space (albeit, always in conjunction with time) within Kant’s thought. Through this disruptive presence of space it is argued that the ‘amplification’ and prioritization of time is not simple, straightforward or without problems, and some of those problems are also already present within the hint of the connection between time and inner sense. It is precisely the ambiguity between inner sense as tied up with time and the sort of inner sense that involves the appearance of a subject’s own thoughts that becomes confused in the Critical distinction and relation between inner sense as time and as apperception. This confusion is furthered when Kant makes apperception central to his arguments in the Transcendental Deduction as he attempts to prove the legitimacy of the connection between sensibility and understanding.

This short section from the famous Herz letter thus pre-empts and provides many of the themes that will structure the engagement with the *Critique of Pure Reason* in the next Chapter: The distinction between time and space as inner and outer sense; the preeminence ascribed to time and its prioritization in certain arguments of the *Critique*; the complex relation between inner sense and apperception as two forms in self-perception; the debate between realism and idealism; and, finally, the problematic

parallel and relation of space (as extension rather than metaphor) and time, which ultimately will be the most important point in asserting the centrality of space within Kant's philosophy.

Before turning to focus on the *Critique* and its direct account of space in the next Chapter, a further examination of the Herz letter is necessary. This examination shows how in this letter Kant also, in addition to both the issues of time and space discussed here and the more general foreshadowing of the *Critique* discussed in §3.1 above, also begins to develop the way in which space is covered over in the *Critique* as it is 'carried over' into the geographical metaphors discussed in the present Chapter. Immediately following Kant's reply to Lambert's objection he writes:

But enough about this. It appears here that one doesn't obtain a hearing by stating only negative propositions. One must rebuild [*aufbauen*] on the plot [*Stelle*] where one has torn down [*niederreißt*], or at least, if one has disposed of the speculative brainstorm, one must make the understanding's pure insight dogmatically intelligible and delineate its boundaries [*Grenzen*]. With this I am now occupied (10: 135, translation modified: *Grenzen* as 'boundaries' instead of 'limits')

Here Kant makes recourse to some of the spatial geographical metaphors of 'building' or 'tearing down' upon a certain 'plot' or 'location' with which the present Chapter commenced; as well as defining his task, the task of writing the *Critique of Pure Reason* over the next nine years, as one of disposing of speculation through delineating the boundaries of the understanding. The immediate emergence of these geographical metaphors after the consideration of the reality or ideality time and space is pertinent because it captures in miniature the progress and place of Kant's spatial thinking in the *Critique*. In these sections of the Herz letter, Kant uses a fundamental argument about space—its ideality—to reveal something about time—its parallel ideality—a movement that reflects the extension of the arguments of incongruent counterparts from the *Directions in Space Essay* to the *Inaugural Dissertation*. In the extension of this argument, however, the tensions of time in the form of inner sense and the problems encountered in terms of the perception of an inner state result in a growing focus on the role of time at the expense of space; this is the argument that Kant pursues throughout at least the A-Edition of the *Critique*. Space as either physical extension and the form of external perception is not entirely forgotten or neglected in this account of time and time-determination, but its importance is certainly diminished; this

importance, nonetheless, emerges in a different form, in precisely the sort of geographical metaphors that this Chapter has explored. It is carried over in these metaphors just as much as they also cover over the importance of space.

This Chapter has explored the dual action of the way in which the role of space is both carried and covered over by Kant's use of it in the form of the spatial metaphor. The original insight into the importance of such metaphors came from the analysis, in the previous Chapter, of the way in which space occupies a problematic and disruptive position in Meillassoux's temporal philosophy. Meillassoux constructs a philosophical system that is explicitly, if somewhat ambiguously, about time. The ambiguity in Meillassoux's system rests upon the duality of the heterogeneous concepts of time that he postulates—'hyper-chaos' and chronological succession. However, Meillassoux does not explicitly address the tension between these two forms of time, instead the tension appears through the disruptive roles of space in his system, both as a metaphysical notion of extension and, more importantly, as an analogy through which chronological time can be determined. This disruptive role of space as an analogy through which time can be determined connects up with a similar consideration of space and an analogy in the *Transcendental Aesthetic*. Investigating this role of space as analogy in Kant, however, reveals that his use of the spatial analogy opens up onto a much wider and more general use of metaphors of space within his thought, especially metaphors of geography, cartography and navigation. At the same time as these spatial metaphors emphasize the extent or depth of Kant's engagement with spatial modes of thinking, their use as merely metaphors and not as direct elaborations of the nature of space, often means that they obscure rather than elaborate Kant's direct thinking about space.

Through a close and careful interpretation of how Kant elaborates and uses these spatial metaphors in the *Critique of Pure Reason*, this Chapter argued that they nonetheless are connected to his explicit engagements with the metaphysics of space. In particular, the issue of *orientation*, and its connection to directionality, which Kant examined in two closely related essays, 1768's *Directions in Space* and 1786's *Orientation in Thinking*. These two essays are incredibly useful for tracing the developments of Kant's thought. The earlier *Directions in Space* essay played an important role in Kant's development of the separation of sensibility and

understanding, a key element of both the Critical philosophy and also its earlier pre-figuration in the *Inaugural Dissertation* of 1770. The *Inaugural Dissertation* also contains Kant's conception of space as a form of sensibility, specifically the form of outer sense, which is carried over almost unchanged into the Critical philosophy proper. The feedback and criticisms that Kant received about this work from Lambert and Mendelssohn also played an important role in the development of the Critical philosophy. These criticisms focused on Kant's argument for the ideality of time. It is in attempting to answer these criticisms that Kant brought together the issue of time as inner sense with the question of self-perception and eventually the Critical concept of apperception. This conjunction leads to the centrality of the role of time in the A-Edition of the *Critique*, despite Kant's initial answer to Lambert and Mendelssohn that emphasizes the equivalence and parity of time and space. The identification of the conjunction between time, inner sense and apperception, and the central role that Kant ascribes to apperception in the Transcendental Deduction, provides the key to understanding the interpretation of Kant that claims he prioritizes time over space.

This temporal interpretation is complicated, however, by Kant's return to the problem of space in 1786 with the *Orientation in Thinking* essay (and the *Metaphysical Foundations of Natural Science* of the same year). The B-Edition of the *Critique of Pure Reason* follows these reconsiderations of space by only a year, and in it Kant makes significant changes that are particularly pertinent to the role and importance of space in the Critical philosophy. Those changes, especially the addition of a chapter titled the 'Refutation of Idealism' are also important for reassessing Meillassoux's criticisms of Kant, not only because the charge of idealism was at the heart of Meillassoux's argument that Kant is a 'correlationist,' but rather because the issue of the relation between time and space was a problematic point in Meillassoux's philosophy and that relation is precisely the topic of the Refutation.

The next Chapter examines these two tendencies in the Critical philosophy, the A-Edition's prioritization of time as inner sense and the B-Edition's reclaiming and reassertion of the importance of space as outer sense, and argues that the second movement demonstrates that space holds a central role in Kant's philosophy, but one that is often over-shadowed by the issue of time-determination. As such, the topic of Chapter 5 is a direct engagement with the Critical philosophy and thus a completion of the progression of this thesis through the three stages of the 'canonical distinction' of

dogmatism, skepticism and Criticism. In completing this examination of all the stages of the ‘canonical distinction’ we are finally in a position to assess Meillassoux’s characterization of Kant as a ‘catastrophe,’ his supposed ‘avoidance’ of the ‘canonical distinction’ and his ‘abandonment’ of the transcendental. Confronting these issues through the B-Edition of the *Critique* also underscores the centrality of space within Kant’s philosophy and the stakes of the relation between time and space in interpretations of Kant.

Chapter 5. Determination and Orientation: The Relation of Time and Space in Kant's Critical Philosophy

After examining how Kant uses spatial metaphors throughout his writings, and how this is connected to the role that considerations of space played in his transcendental turn, the previous Chapter ended with Kant's response to the objections raised by Lambert and Mendelssohn to his argument for the ideality of time in the *Inaugural Dissertation*. Both of their objections consisted of the argument that even subjective representations take place in time and thus time itself must have some reality beyond or independently of the particularities of those representations and thus cannot be ideal. This objection brings together two elements that feature prominently in the *Critique of Pure Reason* (possibly as a consequence of the importance ascribed to them by Lambert and Mendelssohn), the nature of self-perception, in terms of both the perception of the contents of one's own intuitions, thoughts and cognitions and also of the perception of some thing that is the self, and also the issue of time and its relation to the representation of the world. In the present Chapter it is argued that these issues are ones that are key to the system that Kant sets out in the *Critique of Pure Reason*—in the case of time this has already been partly explicated in terms of the reconfiguration of the principle of sufficient reason in terms of time-determination in the Analogies of Experience (see §3.2 above). However, even insofar as they are central, they are also somewhat obscure and problematic elements of Kant's system. Furthermore, as with his responses to Lambert and Mendelssohn in his letter to Herz, the confrontation with the problematic issues of time and self-perception in the *Critique* is also connected to the issue of space and its relation to time, both directly and as parallel form of intuition. By showing how the problems of time in the *Critique* develop in terms of the issue of self-perception, and how these problems are resolved through the parallel issue of space, this Chapter thus argues for the centrality of space alongside time within Kant's system and completes the aim of this thesis. In addressing the core of the positive system that Kant develops in the *Critique* it also elaborates the third stage of the 'canonical distinction' of dogmatism, skepticism and Criticism, and concludes the investigation into Kant's philosophy via the interpretation of Meillassoux.

The entwined strands of this argument about the problems of time and self-perception and the assertion of the centrality of space, is not, however, particularly straightforward. This is because it is the main focus of the changes to the *Critique* that Kant made for the 1787 B-Edition.¹ In the Preface of the B-Edition, Kant directly addresses the changes between the two Editions and declares that he aims to “remove as far as possible those difficulties and obscurities from which may have sprung several misunderstandings into which acute men, perhaps not without fault on my part, have fallen in their judgment of this book” (Bxxxvii). The purpose in the additions and changes is, at least in part, to address the criticisms of the review of the A-Edition in the *Göttingen Review* in 1782 (see §1.2. footnote 4, above), in particular the charge that transcendental idealism is Berkeleyan idealism. Kant even goes so far as to add an explicit ‘Refutation of Idealism,’ which he admits is “the only thing I can really call a supplement” and through which he aims to provide “a strict proof (the only possible one, I believe) of the objective reality of outer intuition” (Bxxxix, footnote). It is this Refutation that Meillassoux explicitly ignores and attempts to bypass through his identification and criticism of ‘correlationism’ as opposed to ‘idealism.’ (see §2.1.1 above). The Refutation of Idealism, however, is not simply added to the rest of the A-Edition version of the *Critique* as an extra or merely supplementary argument, but

¹ For Guyer (1987), the changes between the two Editions show how Kant clarified (through space and outer sense) an argument about time-determination that he only glimpsed in the A-Edition and then went on to resolve in the Refutation of Idealism in the B-Edition, and thus the changes can be used to demonstrate the development of this argument. Heidegger, in *Kant and the Problem of Metaphysics* (1997, henceforth the *Kantbuch*), uses the changes between the two Editions to argue for the opposite, that Kant presented a better argument about the importance of time in the A-Edition and that he “shrunk back” from this argument in the B-Edition and retreated into an argument from the pure understanding. In *Being and Time* he also argues that the ‘scandal of philosophy’ is not that idealism must be still be refuted, but rather that arguments against it are still expected even though they are, in Heidegger’s view, based upon an incorrect conception of metaphysics (1978, 249; H. 205). Allison (2004), presents the argument of the Deduction mainly in terms of the B-Edition, albeit with different conclusions to Guyer; in later work (2015) he also provides commentary on both versions of the Deduction and examines the differences between them. Green (2010) examines both Editions in order to argue that most of the changes are concerned with the problems of inner sense. Meillassoux, in line with his explicit dismissal of the importance of the Refutation of Idealism, only discusses the A-Edition version of the Deduction. The argument presented here uses elements from all these different interpretations of the importance of the changes in order to show how it was the problems of time and inner sense in the A-Edition that lead Kant to recognize, in the B-Edition and other writings around the same time, the important interrelation of time and space and thus the necessity of centrality of space within his philosophy, even if this centrality itself is not without problems.

rather is a central element in an entire, but subtle, reorientation of the role of time and inner sense in relation to space and outer sense in Kant's system of transcendental idealism.

Kant himself explicitly states that one of the central elements of his revisions between the two Editions is concerned with time. He writes of how he aims to remove "the misunderstanding of the Aesthetic, chiefly the one in the concept of time." He goes on to list his other changes: "the obscurity in the Deduction of the Concepts of the Understanding, next the lack of sufficient evidence in the proofs of the Principles of Pure Understanding, and finally the misinterpretations of the Paralogisms advanced against rational psychology" (Bxxxviii). As numerous commentators have observed, the majority of the changes that Kant makes to the B-Edition are concerned with inner sense and thus the problematic status of time in his system (and hence also of space and the relation between the two).² This reinforces the argument that inner sense is a central, but also problematically obscure element of Kant's system.³ The emphasis on time and inner sense in the *Critique* follows the argument made above in Chapter 3 that Kant's reconfiguration of the principle of sufficient reason, a key element of his philosophical project both pre-Critical (as examined in Chapter 2) and Critical, actually takes place in terms of time and time-determination. It also develops from the argument made in Chapter 4 that the objections that Lambert and Mendelssohn raised concerning the ideality of time and its role in self-perception in the *Inaugural Dissertation* prompted Kant to give time and inner sense a greater emphasis in the development of the Critical philosophy in the A-Edition of the *Critique of Pure Reason*.

² See especially Green, who notes that the amendments concern "the doctrine of pure intuitions" (43); Weldon, who explicitly notes that the amendments are "designed very largely to elucidate difficulties in the doctrine of inner sense" (1968, 258); and Washburn, who asserts that "it is the problem of inner sense alone that provides a systematic interpretation of the second edition" (1976, 59n).

³ Robert Pippin refers to Kant's doctrine of inner sense as a "dark theory" (173); Peter Strawson similarly identifies it as "one of the obscurest points of all" (1966, 247); Henry Allison speaks about the "inherently paradoxical" and "exceedingly fragmented" nature of Kant's discussion of inner sense (2004, 276); and, Garth W. Green, in his book of the same title, examines the entirety of the *Critique* in terms of what he calls 'the aporia of inner sense' (2010).

The present Chapter expands upon this insight and analyzes the problematic roles of time and inner sense, as a form of self-perception, in the *Critique* and especially how they relate to space and how this relationship changes across the two Editions and in Kant's other writings in the 1780s. This analysis of the relation between time and space connects with the analysis of Meillassoux's own temporal reconfiguration of the principle of sufficient reason and the system of 'speculative materialism' that he builds around this reconfiguration. The examination of Meillassoux's system in Chapter 3 above argued that even though his focus is on time in the form of 'hyper-chaos,' space nonetheless plays an ambiguous, problematic and disruptive role within his system and is never fully accounted for or reconciled with the emphasis on time. In particular, this disruptive role of space in Meillassoux is concerned with the problems of the directionality and determination of time necessary for his use of 'chronology' but absent from his system of time as 'hyper-chaos.' The argument presented here extends the parallel between Kant and Meillassoux, and examines the way in which space plays a disruptive role in the B-Edition of the *Critique* in response to the problems of time and self-perception that are present in the A-Edition. Specifically, it is argued that in order to reconcile the relationship between time and space in Kant it is necessary to pay close attention to the Refutation of Idealism. As it is in the Refutation where Kant ultimately asserts the importance of space as that which provides the persistence necessary for time-determination, and in doing so completes the task he sets in the Transcendental Deduction and his reconfiguration of the principle of sufficient reason in terms of the determination of succession according to the category of cause and effect. This means examining precisely what Meillassoux explicitly ignores, and showing that the importance of the Refutation of Idealism is not just in its argument against idealism, but instead in its consequences for the relation between time and space within Kant's system.⁴ Setting out and examining this relationship, in turn, develops an alternative analysis of Meillassoux's philosophy and especially his criticisms of Kant. All of which leads to the recognition of the importance of space for

⁴ Meillassoux not only ignores the Refutation of Idealism, he also explicitly preferences the A-Edition of the *Critique* and does not engage with the differences between the two Editions. This preference is evident in his use of the "linear commentary of the objective deduction of 1781," found in "Jacques Rivelaygue (1992), *Leçons de métaphysique allemande. Tome II: Kant, Heidegger, Habermas* (Paris: Grasset), pp. 118–24," as the basis for his own discussion of the Deduction in Chapter 4 of *After Finitude* (134n5).

Kant in terms of its co-implication with time insofar as it is necessary for any time-determination, which completes the account of the reconfiguration of the principle of sufficient reason. And by extension to the recognition of the important role of space in the history of philosophy after Kant, which had been neglected due to the focus on time that was problematically engendered by the problem of time in Kant.

§5.1. Time and Space in the Transcendental Aesthetic and A-Paralogisms

The first half of the *Critique*, where Kant sets out his positive philosophical system of transcendental idealism, is structured around the duality between sensibility and understanding that constitutes a fundamental feature of that system. Chapter 2 above argued that this division, along with the additional ‘third faculty’ of reason, is key to Kant’s critique of dogmatism, and thus his own careful maintenance of this distinction is an important element of his philosophy. Kant sets out this distinction early in the *Critique*: “there are two stems of human cognition, which share a common but unknown root, namely **sensibility** and **understanding**, through the first of which objects are given to us, but through the second of which they are thought” (A15/B29). The positive elements of the *Critique* thus involve an investigation of first sensibility—in the Transcendental Aesthetic—then understanding—in the Transcendental Logic—and finally an argument for the legitimacy of their synthesis through (although Kant does not continue the metaphor) the identification and elaboration of the ‘common but unknown root’ in the Transcendental Deduction and the Analytic of Principles. Although the issues of time, self-perception and the importance of space run through all of these sections, Kant most explicitly engages with time and space in the context of the Transcendental Aesthetic and his examination of the “science of all the principles of *a priori* sensibility” (A21/B35).

The main concern of Kant’s analysis in the Aesthetic is to show that space and time are ideal forms of pure intuition, but not themselves empirical objects or things in themselves, and also that they are *a priori* and as such apodictic and necessary (A22/B36). This is a development from the conclusions of the *Directions in Space* essay, which argued that space must be sensible and the result of an ‘inner feeling’

rather than being either an aspect of the world as it is or discursive and relational in the Leibnizian sense. Similarly, it also builds on the arguments for the ideality of time and space in the *Inaugural Dissertation*.⁵ In the *Critique* Kant considers space and then time (in contrast to the *Inaugural Dissertation*, where he presented them in the opposite order). This leads many commentators to only examine Kant's arguments for the ideality of space and then merely point to their parallel arguments for time.⁶ In the A-Edition Kant presents five arguments for the ideality of both space and time, in the B-Edition he disrupts this symmetry dividing the two sets of arguments into Metaphysical and Transcendental Expositions. For space he simply moves one argument, his third, that of the apodictic necessity of geometry as the science of space, to the Transcendental Exposition (B40-1), leaving four Metaphysical arguments. For time, however, he leaves the five arguments from the A-Edition in place as the Metaphysical Exposition, and inserts a new argument, concerning motion as the apodictic science of time (B48-9), as the Transcendental Exposition, resulting in five arguments about space and six about time. The new Transcendental Expositions of space and time are Kant's main arguments that space and time are *a priori* forms of intuition, as the apodictic necessity of geometry and motion cannot be drawn from experience (this is the insight taken from Hume, that experience never provides necessity) and thus must be brought to experience *a priori* and as pure intuitions. In putting forward his arguments for space and time as *a priori* forms of intuition, Kant also sets out several features of space and time that run through the rest of the *Critique* with important consequences. It is worth examining Kant's introduction of

⁵ Kant does not use the argument from incongruent counterparts and spherical triangles in the *Critique*, but he does use it in the *Prolegomena* §13 (4: 285-6).

⁶ See in particular Allison, who writes that, "Since the expositions of space and time parallel one another, we shall concentrate on the former, referring to the latter in those instances where Kant's analysis differs significantly" (2004, 99). Paul Guyer, in a similar vein, writes of how, "the argument for the transcendental ideality of time proceeds by parallels (often strained) to the example of space. This is not to say that Kant was any less committed to the transcendental ideality of time than that of space," indeed as Guyer observes "we shall see how it is time rather than space which is foremost in Kant's thoughts." However, this is not enough to prevent him—Guyer—from concluding, "But the derivative nature of the theory of time in the 'Transcendental Aesthetic' does mean that I can focus my exposition of Kant's arguments there on the case of space, as indeed most commentators do" (1987, 345). An exception to this convention is Garth Green, who after quoting the above section from Guyer, qualifies "but as this [i.e., Green's] analysis will not" (58n.29).

space and time in full, as it contains many of the important elements that will become significant in the Aesthetic. He writes:

By means of outer sense (a property of our mind) we represent to ourselves objects outside us, and all as in space. In space their form, magnitude [*Größe*] and relation to one another is determined, or determinable. Inner sense, by means of which the mind intuits itself, or its inner state, gives, to be sure, no intuition of the soul itself, as an object; yet it is still a determinate form, under which the intuition of its inner state is alone possible, so that everything that belongs to the inner determinations is represented in relations in time (A22-3/B37).

This is the initial division of the duality of the *outer* and the *inner*, which corresponds to the forms of sensibility as concerned with space and time, and as such is the important distinction that is at work in the Aesthetic. It is not enough to merely analyze the Aesthetic directly in terms of space and time, rather it is the definition of space as *outer* sense, and time as *inner* sense that is the important development of the *Critique*, and which must thus be examined in detail, for it is this division that develops in terms of *heterogeneity*, *analogy* and *priority* (as argued via Strawson in §1.5 above), and which makes the distinction between space and time itself. Ultimately, the complications that surround Kant's rather obscure doctrine of time and inner sense as some sort of self-perception are at the heart of the struggle between space and time (the prioritization of time in Kant's and Meillassoux's reconfiguration of the principle of sufficient reason, and the reinterpretation presented here in terms of the centrality of space) and thus it is the interplay between time and space as inner and outer sense that sets up all of these issues.

In the initial characterization of space and time in the section quoted above, space is specifically the form of representation for 'objects outside us,' a rather ambiguous formulation as it leaves open the question of whether there can be a non-spatial representation of objects somehow not outside us, or if the representation of objects must always be one of being 'outside' and spatial. It does, however, specify that it is *in* space that the 'form, magnitude and relations between objects' are determined, which is Kant's basic definition of space. Similarly, time is the form of inner determination, but not of a representation of an object such as the soul. Nonetheless it somehow represents and determines something in terms of the relations of time (in a foreshadowing of the arguments of the Schematism and the details of the Analogies),

which leaves open, insofar as it is never specified, the possibility that some other sort of object, or even objects in general, may be represented internally and temporally.

It is answering such questions that Kant must assert the *heterogeneity* of the inner and the outer (and thus of time and space). He immediately argues that, “Time can no more be intuited externally than space can be intuited as something in us” (A23/B37),⁷ providing the strongest possible statement of the separation between space as time as the outer and the inner. The details of this heterogeneity appear a few pages later in Kant’s conclusions about time. In the second conclusion he writes that, “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/B49-50). This fundamental definition of time in terms of inner sense as a sort of self-perception sets up the duality and tension about time that runs through the rest of the of the *Critique*. The source of this tension is the fact that just as Kant defines time in terms of inner sense, he also limits and restricts the scope of such sense as self-perception. Time has “neither shape or position” which means that it cannot represent or define outer objects in the same way that space and outer sense can. The implication of this restriction, or “limiting condition” as Green calls it (88), is to prevent the possibility of the pure intellectual intuition of the self or soul that could serve as the foundation for a rationalist psychology and dogmatic metaphysics, such as Descartes’s, in general.

Kant expands on this ‘limiting condition’ of the heterogeneity of time and space in his critique of rationalist psychology in the Paralogisms of the A-Edition. There, he argues that “time, which has in it nothing abiding, and hence gives cognition only a change in determinations, but not a determinable object. For in that which we call the soul, everything is in continual flux [*Flusse*], and it has nothing abiding [*nichts Bleibendes*]” (A381). The inconstancy of inner sense as the flux of time means that it cannot have any object, since without an abiding structure against which objects and even time can be determined, they can never be known in the technical sense of Kantian cognition. This precludes the possibility of out and out subjective idealism, for the objects of the

⁷ Green names this statement the “heterogeneity thesis” and identifies it as a defining element of Kant’s philosophy (55).

world cannot be determined, experienced or understood as only internal to the mind of subject or as things in themselves that are directly known through intellection and reason alone. The inconstancy of time also has consequences for the possibility of self-perception and the nature of the self in general. The section of the Paralogisms continues: “except perhaps (if one insists) the I, which is simple only because this representation has no content, and hence no manifold, on account of which it seems to represent a simple object, or better put, it seems to designate one” (A381). This empty and manifoldless ‘I’ that only *seems* to designate a simple object is nothing like the objects of experience that Kant describes in his Critical philosophy (as syntheses of sensibility and understanding). The nature of this ‘I’ is only fully revealed in the Transcendental Deduction and Kant’s account of apperception as another sort of self-perception; but here in the A-Paralogisms and Aesthetic, Kant unequivocally limits the possibilities of inner sense through the recognition of the inconstancy of time. The ‘I’ of the Paralogisms is only ever an illusory object or transcendental idea in the technical sense that Kant uses in the Dialectic to criticize dogmatic metaphysics (see Chapter 2 above).⁸

The A-Edition Fourth Paralogism is explicitly concerned with “the ideality (of outer relation)” (A366). It is here that Kant makes the explicit distinction between transcendental realism and idealism (as discussed in §2.1.2 above), which is central to the overall argument of the Dialectic (that the illusions of reason lead the understanding beyond its legitimate boundaries and into the error of transcendental realism). The outcome of this distinction is Kant’s argument that the transcendental idealist can be an empirical realist about the existence of the external world, but only insofar as that external world is only ever considered as appearances known through

⁸ The arguments of the Paralogisms as a whole and their criticism of rationalist psychology are summarized in the Appendix to the Transcendental Dialectic. There, Kant reasserts the necessity of schematized intuition for objects of experience, and argues that, “By this means, however, I will never attain to a systematic unity of all appearances of inner sense,” which means that rationalist psychology must proceed in a different manner, not through experience. As he concludes, “reason takes the concept of the empirical unity of all thought, and, by thinking the unity unconditionally and originally, it makes out of it a concept of reason (an idea)” (A682/B710). This idea of the soul is, of course, an illusory transcendental idea, and Kant’s criticism of it in the Paralogisms is another instance of his limitation of inner sense, this time through the limitations of the critique of reason itself.

sensibility. This, as Kant argues, has consequences for the ‘reality’ of the ‘external world’:

matter for him [the empirical realist] is only a series of representations (intuition), which are called external, not as if they are related to objects that are **external in themselves** but because they relate perceptions in space, where all things are external to each other, but that space itself is in us (A370).

Space is transcendently ideal because it is, in the formulation that Kant uses here, ‘in us’ and as a result the externality of objects outside us is not to be taken in a transcendental sense as things in themselves, but only in a sensible sense as perceptions in space. Kant recognizes that the expression ‘outside us,’ the inverse of the ‘in us’ of space as a form of perception, “carries with it an unavoidable ambiguity” insofar as it can refer to either things in themselves (the “transcendental sense”) or outer appearances (“empirically external”) (A373).⁹ At this stage, in the A-Edition Fourth Paralogism, Kant restricts his meaning of ‘outside us’ to “things **that are to be encountered in space**” (A373) and not the transcendental sense of things in themselves. Kant clarifies precisely what this means for the ‘reality’ of space a few pages later:

Of course, space itself with all its appearances, as representations, is only in me; but in this space the real [*Reale*], or the material of all objects of outer intuition is nevertheless really [*wirklich*] given, independently of all intervention; and it is also impossible that **in this space** anything **outside us** (in the transcendental sense) should be given, since space itself is nothing apart from our sensibility (A375).

Paul Guyer calls this an “ontological reduction” of the nature of space, but also argues that Kant will renounce this ‘reduction’ in the 1787 B-Edition and argue, through the Refutation of Idealism, in favour of objects in space as numerically distinct entities that exist outside the subject in the transcendental sense (1987, 281). The ‘ontological reduction’ of space in the Fourth Paralogism is similar to Meillassoux’s diagnosis of the ‘radical exteriority’ of ‘correlationism,’ which reduces the ‘outside’ of the real

⁹ The terminology of ‘transcendental’ and ‘empirical’ here is the same as the way in which Kant distinguishes ‘transcendental realism’ from ‘empirical realism’ in the Paralogisms (see §2.1.2 above).

world to something that is only ever a correlate of the ‘inside’ of the subject, i.e., the Kantian ‘in us.’¹⁰ This similarity, shows how Meillassoux’s interpretation of Kant is largely based upon the A-Edition of the *Critique*, which becomes clearer with Meillassoux’s interpretation of the Deduction in terms of the A-Deduction; this interpretation is problematized by the changes that take place between the two Editions, such as those outlined by Guyer concerning the Refutation of Idealism, which has many similarities to the A-Edition Fourth Paralogism, but also some significant differences. A direct analysis of Guyer’s argument for the reality of ontologically distinct entities in space must wait for the examination of the B-Edition’s Refutation of Idealism in §5.4 below. But such arguments further problematizes the ‘correlationist’ interpretation of Kant put forward by Meillassoux.

In the A-Edition version of the Fourth Paralogism, however, Kant already engages with the issue of idealism. In fact, Kant addresses what he discerns as two types of idealism, dogmatic and skeptical idealism. As he defines them, the dogmatic idealist “**denies** the existence of matter” while the skeptical idealist “**doubts** it because he holds it to be unprovable” (A377). Kant uses these arguments for idealism as insights into the restriction of reason, insofar as it alone cannot determine the empirical reality of the ‘external world;’ and thus for the necessity of sensibility and the arguments of the Aesthetic as the only way to gain knowledge and experience of the empirical reality of the ‘external world’ (A378). As he explicitly concludes, we must regard external objects,

not as things in themselves but only as representations ... which are called external because they depend on that that sense which we call outer sense; its intuition is space, but it is itself nothing other than an inner mode of representation, in which certain perceptions are connected with one another (A378).

¹⁰ Meillassoux contextualizes his dismissal of the Refutation of Idealism with a similar dismissal of phenomenological ‘radical exteriority’ (Mackay 2007, 408, see also §2.1.1 above). His explicit discussion and critique of ‘radical exteriority’ takes place in his introduction of the concept of ‘correlationism’ in *After Finitude* (7, see also §3.4 footnote 53 above).

Kant then points back to the Transcendental Aesthetic as an independent argument for this same conclusion.¹¹ He also reasserts the limitation that any perception or doctrine of the soul can only take place “in the empirical sense” (A379), and that “The **transcendental object** that grounds both outer appearance and inner intuition is neither matter nor a thinking being in itself, but rather an unknown ground of those appearances that supply us with our empirical concepts of the former as well as the latter” (A379-80).¹² This repeats the insight originally put forward in the response to Lambert and Mendelssohn in the Herz letter, that both outer and inner intuition yield only appearances and the thing in itself must remain opaque and unknown even with regard to its temporality or spatiality. In this recasting of the problem of idealism, as that which prompts the insights of the Aesthetic into the ideality of time and space and the reality of empirical appearances, Kant also gestures towards the shift in the line of philosophical investigation that underpins his transcendental turn. In the Observations that conclude the A-Paralogisms he reasserts the basic question of the positive philosophy elaborated in the first half of the *Critique*:

Now the question is no longer about the community of the soul with other known but different substances outside us, but merely about the conjunction of representations in inner sense with the modifications of outer sensibility, and how these may be conjoined with one another according to constant laws, so that they are connected into one experience (A385-6).

The ‘constant laws’ that guide the synthesis of sensibility into experience are the categories of the understanding that Kant sets out in the Transcendental Logic, but of more importance for the focus of this Chapter is the relation between inner and outer sense that Kant puts forward here. The argument of the Fourth Paralogism concerning

¹¹ Kant also addresses Berkeleyan or ‘dogmatic’ idealism in the in the Appendix to the *Prolegomena*, which directly confronts the charge put forward in the *Göttingen Review* of 1782 that Kant’s transcendental idealism was essentially Berkeleyan idealism. Kant presents the same argument against Berkeleyan idealism and reasserts how the central thesis of his transcendental idealism avoids such idealism: “Space and time, together with everything contained in them, are not things (or properties of things) in themselves, but belong instead to appearances” (4: 374).

¹² Kant later argues that outer intuition itself is somewhat opaque and constitutes a “gap in our knowledge” that can only be indicated “by ascribing outer appearances to a transcendental object that is the cause of this species of representation” (A393). This is one of the problems of the A-Edition that Kant aims to rectify in the changes for the B-Edition.

outer relations, is now completely reduced to the issue of the conjunctions of representation in inner sense. Even if ‘inner’ has the ambiguous dual meaning that Kant earlier ascribed to the phrase ‘outside us,’ this reduction still prioritizes inner sense over the modifications of outer sense. This is in direct tension with the ‘limiting condition’ that Kant has already ascribed to inner sense through the argument concerning the inconstancy of time, as he now asserts a certain priority to inner sense as the locus of the conjunction that constitutes knowledge and experience and thus overcomes the heterogeneity between them argued for in the Aesthetic.

Close inspection of the Aesthetic, however, reveals that Kant already prioritized inner sense contrary to the ‘limiting conditions’ of inconstancy and heterogeneity. In fact, the prioritization of inner sense and time is actually a direct corollary of the heterogeneity thesis of the Aesthetic. Garth Green sets out this corollary, and the issues it raises, perfectly when he observes that, “Only by means of the heterogeneity thesis may the spheres of inner intuition and outer intuition represent, under distinct principles and in distinct spheres, a spontaneous faculty of cognition and a passive reception of extended material objects respectively” (84). This distinction arises from heterogeneity because temporal inner sense, as something that cannot be intuited externally, must arise spontaneously within the subject as a self-affection, whereas external objects are given to the receptive subject and thus intuited through the form of space. The distinction between the active spontaneity of inner sense and the passive receptivity of outer sense also begins to push Kant towards the assertion of the priority of inner sense, and time, over outer sense and space. Kant summarizes this distinction and puts forward the priority of time and inner sense when he argues that:

Time is the *a priori* formal condition of all appearances in general. Space as pure form of all outer intuitions, is limited as an *a priori* condition to merely 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 appearance in general, and indeed the immediate condition of the inner intuition (of our souls), and thereby also the mediate condition of outer appearances (A34/B50-1).

This is in conflict with the earlier assertion that time, as the form of inner sense, is only—“nothing other”—the intuition of the self and its inner state. It was this earlier statement that meant that inner sense was a spontaneous self-affection, as distinct from

the passive affection of the givenness of external objects. However, Kant now says that inner sense also somehow ‘mediates’ the intuition of spatial external objects. This is because those objects, as formed in space by outer sense are not things in themselves, but rather appearances, and as appearances they are taken to be in the mind and thus must be determined by inner sense as the form of all determinations of the mind. This amplification of inner sense follows the line of the objections to the *Inaugural Dissertation* raised by Lambert and Mendelssohn, both of whom emphasize the way in which the appearances of the world—of outer objects—take place both in the mind and in time. It also contains Kant’s response to these objections, that the perception of these appearances can itself also only be an appearance and thus operates through an ‘inner sense’ and must be subject to the forms of perception, or at least time; and thus, as perception alone, is simply not applicable to the question of the ‘reality’ of time in terms of things in themselves, or the ‘transcendental’ sense of the phrase ‘outside us.’ Kant thus avoids the mistake he finds in Lambert and Mendelssohn of moving from the appearance to the reality of time insofar as he emphasizes that the thing in itself of that inner perception, the self or soul, cannot be known. There remains in these responses, however, a tension between the ‘amplification’ of inner sense and the limits that Kant must also place on what can be known through inner sense.¹³ As such, the distinction between inner sense as a spontaneous self-affecting faculty and outer sense as a passive receptivity also involves an expansion or ‘amplification’ of the former so that it can include latter within itself, in a contradiction of the earlier assertion of their heterogeneity. Somehow, although just how is not yet made clear, spatial relations are capable of being internalized and subjected to the temporal determinations of inner sense.

The obscurities and tensions of the relationship between inner and outer sense are clarified somewhat, but not entirely resolved, in the more explicit articulation of their properties in the Aesthetic. In the Metaphysical Exposition of time, as it appears in

¹³ This tension is what Garth Green describes as the ‘aporia of inner sense,’ he describes it as: “(1) the centrality of time as form of inner sense, and (2) the tension that resides within it, as both an inconstant, aspatial manifold, indeterminate in order that *Seelenlehre* be negated, and as spatial, constant, and an *Inbegriff*, in order that unity of and in consciousness be synthetic” (129). This tension, the ‘aporia of inner sense,’ becomes more obvious through the examination of the Transcendental Deduction below. The aporetic nature of inner sense and time is also what ultimately leads Kant to recognize the importance of space.

both Editions of the *Critique*, Kant argues that time “has only one dimension: different times are not simultaneous [*zugleich*], but successive [*nacheinander*] (just as different spaces are not successive [*nacheinander*], but simultaneous [*zugleich*]” (A31/B47). This is Kant’s most basic definition of space and time, as simultaneity and succession respectively.¹⁴ Difference and differing, in terms of both time and space, obviously play a big part in how the distinction is set out here. The simultaneity of space would thus seem to be only judged against the possibility of change provided temporally. The question, however, must also be reversed, and it must be asked how change can be conceived of as difference if it is only ever the inconstancy of flux? Kant addresses this in the Aesthetic, and it is here that the relation of *analogy* between space and time becomes important.

The problem of determining temporal change out from the inconstancy or flux that he ascribes to time is an issue that Kant is well aware of. The initial consideration of time, where he states that it “belongs neither to a shape or a position” (A33/B50), has already been quoted in support of the thesis of inconstancy. However, the sentence immediately following this statement must now be considered. There, Kant writes:

And just because this inner intuition yields no shape we also attempt to remedy this lack through analogies, and represent the temporal sequence [*Zeitfolge*] through a line progressing to infinity, in which the manifold constitutes a series that is of only one dimension, and infer from the properties of this line to all the properties of time, with the sole difference that the parts of the former are simultaneous [*zugleich*] but those of the latter always exist successively [*nach einander*] (A33/B50).

Here time is once again characterized in terms of succession, while space, as all the points on the line, is simultaneous. However, now this distinction is also itself related:

¹⁴ Although Kant makes this distinction very clearly here, he elsewhere blurs the line and emphasizes the temporal nature of simultaneity:

Time is not an empirical concept that is somehow drawn from an experience. For simultaneity [*Zugleichsein*] or succession [*Aufeinanderfolgen*] would not themselves come into perception if the representation of time did not ground them *a priori*. Only under its presupposition can one represent that several times exist at one and the same time (simultaneously [*zugleich*]) or in different times (successively [*nach einander*]) (A30/B46).

It is precisely this indistinct difference and relation between time and space as succession (or flux) and simultaneity that is at the core of the problems of time and inner sense and the confrontation with these problems in terms of spatiality, but this requires further examination of the *Critique* and the changes between the two Editions.

the *analogy* between space and time, which has been discussed first in §1.5, then in Chapter 3 with respect to Meillassoux's own use of the metaphor of the line, and finally in Chapter 4 where this analogy between time and space provided a way into the analysis of Kant's spatial metaphors in general. This analogy, where the inconstant flow of time is likened to a straight line, a common enough representation of a time line, still maintains the distinction of the earlier-asserted heterogeneity, but also points towards the necessity of some relation, which results in the eventual priority of time but also guarantees the ineliminable presence of space even in that prioritization. Ultimately, this examination of Kant argues that the outcome of the dual-assertion of space and time together is thus their inseparability. However, at this point all that is developed is what Kant says about space and time in the Aesthetic in order to show how there are the seeds for both the prioritization of time and also the underlying disruptions of the necessity of space within that prioritization. In this regard, the assertion of an *analogy* between time and space, which maintains both the distinction and the relation, is very important, as are the details put forward in the section quoted above. It is the spatial simultaneity of the line that allows it to represent that which itself has no shape and is only the inconstancy of the flow from moment to moment. But this section also returns to another feature of time, which is central to Kant's theory of knowledge or cognition, where necessity is brought to experience *a priori*: that it is in the single dimension of time that the material of sensibility is combined into a single manifold of the representations determined *a priori* by inner sense and thus into experience, knowledge and cognition. It is this emphasis on time and inner sense that defines the problematic, and eventually abandoned, arguments of the A-Deduction. Within this 'amplification' of inner sense and the retreat from it in the B-Edition, the analogy of the line continues to play an important role, not merely as analogy but as an indicator of the eventual necessity of the dual articulation of time and space together.

§5.2. The Two Deductions and the Problems of Inner Sense

The arguments of the Transcendental Deductions are notoriously complex and perplexing. Kant himself admits in the Preface of the A-Edition that the Deduction

comprised “the investigations that have cost me the most, but I hope not unrewarded, effort” (Axvi). Notwithstanding this initial effort, Kant entirely rewrote the Transcendental Deduction for the 1787 B-Edition. The changes between the two Deductions are especially revealing for the problems concerning time-determination, inner sense, apperception and space that Kant engages with in both versions, and which remain problematic despite all of Kant’s labours. Even with his ‘costly efforts,’ the arguments that Kant provides in the Deduction are not especially clear. Its aim is to demonstrate the legitimacy of the application of the categories of the understanding, the *a priori* forms of thought as set out in the Transcendental Logic, to the manifold of sensibility that is presented in terms of time and space as the *a priori* forms of sensibility set out in the Transcendental Aesthetic. The combination of sensibility and understanding takes place through the action that Kant names “synthesis” (A76-7/B102). However, the action of synthesis is not unitary. In both versions of the *Critique* Kant discusses it in terms of a ‘threefold synthesis’ consisting of, firstly, the synthesis of the manifold of pure intuition by sense or apprehension, secondly, the synthesis of that manifold by the reproduction of the imagination, and third and finally, the synthesis of the unity of apperception, which Kant also calls the synthesis of recognition in the concept.¹⁵ In the A-Deduction Kant closely follows this ‘threefold’ structure of synthesis and sets out his arguments in terms of each of the stages, progressing according to the order of cognition, by which the manifold is synthesized by sense, then reproduced by the imagination, before it is finally recognized according to the unity of apperception and the legitimacy of the application of the categories is guaranteed. The B-Deduction, however, examines each of these stages in the opposite order and thus abandons the structure of the order of cognition in favour of a more thorough discussion of apperception apparently in response of the obscurity and problems of the A-Edition.

There is much debate about Kant’s argument, or arguments in the Deduction, and across the different versions in the two Editions. Guyer identifies the presence of seven

¹⁵ Kant sets out this ‘threefold synthesis,’ and the various terms he uses to describe its stages, in several places in the *Critique*. It is first introduced in a section known as the Metaphysical Deduction at A78-9/B104, but is repeated at A98 in the Introduction to the A-Deduction and again at A115. It is less prominent in the B-Edition, although Kant still uses it to structure his arguments in the B-Deduction, and it is only referred to briefly at B150-3.

different strategies across the two Editions, through which Kant attempts to complete the Deduction (1987, Chapters 4 & 5).¹⁶ Only one of these—that which argues via the “*a priori* conditions of empirical self-knowledge”—he deems successful (albeit with help from the Analogies and Refutation (149-54)). The plethora of arguments that Guyer identifies is similar to the influential ‘patchwork theory’ of the Deduction, which argues that Kant pieced together a series of drafts of the Deduction rather than composing the argument as a single coherent whole.¹⁷ Henry Allison is critical of such piecemeal accounts of the Deduction and endeavors to set out a clear and coherent argumentative strategy of the Deduction that is ultimately successful in the B-Edition (2004, Chapter 7). The argument presented here is influenced by Guyer’s account of the only successful (or as he calls it ‘alternative’) strategy he finds in the Deduction and his argument that the “real premise” of the Deduction is actually an account of transcendental time-determination (1987, Chapter 3). However, the argument presented here does not proceed through or detailed exegesis of all the different arguments of the Deduction; instead, it argues that the nexus of time-determination, inner sense and apperception is the problematic heart of the Deduction, which prompts Kant to rewrite it for the B-Edition, but is not resolved until he asserts the centrality of space and outer sense in the Refutation of Idealism (this latter point also follows Guyer’s argument). This interpretation of the problems of the Deduction through the issue of time and their resolution in terms of space, thus returns to the issue of the relation between time and space and the relative hierarchy of priority between them that was discussed in §5.1 above in relation to the Aesthetic, but which also defined the interpretation of the engagement between Meillassoux and Kant. Thus the interpretation of Kant presented here via the Deductions and eventually the Refutation of Idealism, provides the means through which to reassess Meillassoux’s criticism of Kant in terms of ‘correlationism,’ inner sense, time and space.

¹⁶ Guyer argues that the A-Deduction is nothing more than “a disjointed summary of significantly different strategies” some of which persist in the B-Deduction despite the changes that Kant makes there, giving the later revised version a similar disjointedness (1987, 73).

¹⁷ The ‘patchwork theory’ of the Deduction was initially, but separately, postulated by Hans Vaihinger and Erich Adickes, and then taken up by Norman Kemp Smith. It was later subject to criticism, most notably by H.J. Paton. For an overview of this debate see Allison 2015, 189n.43, Dicker 93-5, and Guyer 1987, 432n.1.

§5.2.1. *The A-Deduction*

In the A-Deduction Kant expands the role of inner sense in line with his assertion in the Aesthetic that it is the form of “all appearances in general.” Green explicitly argues that, “In the first-Edition Deduction, Kant both relies upon and builds upon the amplified construal of time in the Aesthetic” (128).¹⁸ Kant’s explicit focus on time and the ‘amplification’ that results from this is closely tied to his discussion on self-perception, both as inner sense and ultimately as the transcendental apperception that he puts forward as the ground of the legitimization of the connection between sensibility and understanding and thus the answer to the problem posed by the Deduction. This emphasis or ‘amplification’ of time and the connection to apperception as inner sense, shows the influence of the connections that were part of the objections raised by Lambert and Mendelssohn to the argument for the ideality of time, which both argued from the basic insight that inner representations, which are immediately accessible to the subject, occur in time. Kant’s development of this connection and the resulting ‘amplification’ is most explicit in the ‘general remark’ that he makes at the start of the A-Deduction, which recalls the claim from the Aesthetic that time is the form of ‘all appearances in general.’ This remark comes in the context of Kant’s examination of the first stage of the ‘threefold synthesis’ the synthesis of apprehension, which is concerned with how sensation is combined into a unified manifold, ultimately in inner sense as a self-perception of the contents of the mind as representations. In discussing this synthesis Kant asserts that,

Wherever 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, and as such all of our cognitions are in the end subjected to the formal condition of inner sense, namely time, as that in which they must all be ordered, connected, and brought into relations. This is the general remark on which one must ground everything that follows (A98-9).

This ‘general remark’ was discussed in §3.2 above in terms of Guyer’s argument that it comprises the ‘fundamental premise’ of the Deduction and that the entire problem of

¹⁸ This is the source of the terminology of the ‘amplification’ of inner sense used throughout this Chapter.

the *Critique* and Kant's transcendental theory of experience is a theory of transcendental time-determination. Chapter 3 argued that this issue of time-determination is central to Kant's Critical reconfiguration of the principle of sufficient reason in the Analogies of Experience, which explicitly argue that time is determined through the application of the categories of relation in empirical experience. In this interpretation, the Analogies can be seen as completing the task of the Deduction insofar as they show how the categories apply to sensibility in order to determine time in precisely the way this 'fundamental premise' of the Deduction requires. The Analogies, however, are not properly transcendental insofar as they commence from the empirical experience of the succession of time—what Longuenesse described as the 'phenomenological step' (2001, 77; see §3.2 above)—and only demonstrate how this experience requires the application of the categories of relation. The Deduction aims to prove the legitimacy of such applications without recourse to particular empirical experiences and thus proceeds in a different manner. However, despite identifying this section as the 'fundamental premise' of the Deduction, Guyer also notes that Kant "seemed to ignore [it] in all that followed" (1987, 148) and instead pursues the many different arguments found across both versions of the Deduction. Kant certainly does not explicitly refer to time-determination until the Chapter on the Schematism that follows the Deduction in both Editions (see §5.3.1 below), nor does he attempt to address the ordering and connecting of the relations of time identified in A99 *per se*, but the issue of time and the problems of inner sense and self-perception are present in the arguments of the two versions of the Deduction and indeed are part of the very reason for its rewriting.

The 'amplification' of time in the A-Deduction is not only the 'general remark' at A99, but is also involved in the expanded role that Kant ascribes to the second stage of the 'threefold synthesis': the reproductive synthesis of the imagination. The role of imagination also changes, as Kant decreases significantly its prominence and importance in the rewritten arguments in the B-Deduction. This reduction is connected to the scaling back of the 'amplification' of inner sense in the A-Deduction due to a recognition and reemphasis of the necessity of the 'limiting condition' provided by the inconstancy of time.

In the A-Deduction it is the imagination that ultimately connects sensibility and understanding to produce objective experience, cognition and knowledge, and thus it

is the explication of the imagination that completes the aim of the Deduction. Kant explicitly argues that,

By its [imagination's] means we bring into combination the manifold of intuition on the one side and the condition of the necessary unity of apperception on the other. Both extremes, namely sensibility and understanding, must necessarily be connected by means of this transcendental function of the imagination (A125)

Kant even goes so far as to say that the “pure imagination” is “a fundamental faculty of the human soul, that grounds all cognition *a priori*” (A125). This elevates the imagination to the status of a faculty, on par with sensibility and understanding, the ‘two stems’ of human cognition.¹⁹ One of the main problems with the A-Deduction is that while Kant follows the order of cognition through the ‘threefold synthesis’ and progresses from sensibility in the synthesis of apprehension through to cognition and experience, he does not explicitly set out the role that understanding plays in cognition, but only asserts that “**The unity of apperception in relation to the synthesis of the imagination is the understanding**” (A199). This is one of the issues that Kant attempts to deal with in the B-Deduction, where he argues for the primacy of the understanding and reduces the role of the imagination to merely “an effect of the understanding on sensibility” (B152) and the “synthetic influence of the understanding on inner sense” (B154). This change in the status of the imagination between the two versions of the Deduction not only remedies the lack of arguments concerning the role of the understanding in the A-Deduction, but is also connected to the issues of spontaneity, self-activity and self-affection that arose out of the heterogeneity of inner and outer sense.

It is in the section of the A-Deduction where he initially sets out the synthesis of the imagination that Kant makes reference to cinnabar, which Meillassoux uses to argue that Kant requires the constancy of nature. In §3.3.2 above, it was argued that with this example of cinnabar, Kant is instead concerned with the play of representations and how they, in order to become appearances (in his technical sense of that which is empirically real) “in the end come down to determinations of inner sense” (A101). The

¹⁹ In the *Kantbuch*, Heidegger even goes so far as to argue that imagination as a third faculty is the ‘common root’ of the ‘two stems’ of human cognition (1997, 97-99 [138-142]).

synthesis of reproduction by the imagination makes possible such determinations. Kant introduces it with a familiar image:

If I draw a line in thought, or think of the time from one noon to the next ... I must first grasp one of these manifold representations after another in my thoughts. But if I were always to lose the preceding representations ... from my thoughts and not reproduce them when I proceed to the following ones, then no whole representation and none of the previously mentioned thoughts ... could ever arise (A102).

In the Aesthetic, Kant has already used the analogy of the line to describe how the inconstant flow of time can be grasped and given shape as succession. The example here, however, is slightly different, as it is concerned with the *action* of drawing a line in thought, which takes place over time rather than in the spatial simultaneity of the ‘line progressing to infinity’ presented in the Aesthetic. This synthesis of the imagination is thus an action that describes the ability to bring to mind—i.e. to reproduce and thus maintain—an elapsed representation that is no longer present; and consequently hold it in relation to another representation over time and so determine the temporal relation between them. Moreover, to emphasize the active role of the imagination Kant further distinguishes a “**productive synthesis of the imagination**”, which does not merely reproduce elapsed representations, but functions completely *a priori* and thus, Kant argues, precedes apperception and is the “ground of the possibility of all cognition, especially that of experience” (A118). The example of the drawing of a line in thought describes one side of the operation of the imagination, the combination of the manifold, but the productive synthesis of the imagination is also, and possibly more importantly, the condition for the unity of apperception and the synthesis of recognition, which, according to Kant’s argument, ultimately grounds the legitimacy of the application of the categories.

Imagination is the condition for apperception because it is the means through which the synthesis that makes up the *synthetic* unity of apperception takes place, and only because of this synthetic unity is the recognition that is the final stage of the ‘threefold synthesis’ possible. In turn, it is the recognition of the unity of apperception that underpins the unity of the manifold that makes up objective cognition as the application of the categories to sensibility. As Kant explicitly argues:

no cognitions can occur in us, no connection and unity among them, without that unity of consciousness that precedes all data of the intuitions, and in relation to which all representation of objects is alone possible. This pure, original, unchanging consciousness I will now name **transcendental apperception** (A107).

The important element of this third stage of synthesis is the *recognition* of this unified and original consciousness as a sort of self-perception. Kant asserts that, “We are conscious *a priori* of the thoroughgoing identity of ourselves with regard to all representations that can ever belong to our cognition, as a necessary condition of the possibility of all representations” (A116). The unity of apperception is that which grounds the possibility of the recognition—a self-perception that all experiences belong to the same consciousness— of the unity of experience according to the categories and thus demonstrates the legitimacy of their application to sensibility. Kant emphasizes the element of self-perception in apperception and its importance to the possibility of consciousness itself, later in the A-Deduction: “only because I ascribe all perceptions to one consciousness (of original apperception) can I say of all perceptions that I am conscious of them” (A122). Conscious experience of perceptions thus requires a recognition of the unity of one’s own self and its consciousness, which is transcendental apperception.²⁰

Immediately after his initial introduction of transcendental apperception, Kant explicitly distinguishes it from “**inner sense** or **empirical apperception**” the empirical consciousness of oneself through the determinations of internal perception, which is “forever variable” and “can provide no standing or abiding self in this stream of inner appearances” (A107). Kant thus recognizes the ‘limiting condition’ of inner sense as he outlined it in the Aesthetic, which prevents the appearance of a soul in the flux and constant change of inner sense. In recognizing the need to differentiate so strongly between inner sense and transcendental apperception, Kant also identifies their proximity and potential for confusion, and also the nexus of the central problem that

²⁰ Guyer argues that this section (A122) supplies only a “conditional necessity” of the unity of apperception, it is “only because” the conditions of unity are already supplied insofar as the perceptions are combined in some way (by the synthesis of the imagination as a determination in time) that they can be ascribed to one consciousness. Guyer uses this analysis to argue that it is in fact the possibility of the transcendental time-determination of empirical experience—in line with the ‘fundamental premise’ at A99—that supplies the answer to the legitimacy of the application of the categories to sensibility, which is Kant’s aim in the Transcendental Deduction (1987, 142-4).

runs through both versions of the Deduction (if not the *Critique* as a whole). The attempt to assert the ‘limiting condition’ of the inconstancy of time and flux of inner sense, is in tension with the ‘amplification’ of inner sense that occurs throughout the rest of the A-Deduction via the productive synthesis of the imagination. Consequently, the rewriting of the B-Edition of the *Critique* explicitly addresses at least two of the problematic points that arise from the A-Deduction. Firstly, it attempts to further reinforce the distinction between transcendental apperception and inner sense in order to reassert the ‘limiting condition’ of the inconstancy of time; and, secondly, part of this limitation of the role of time and inner sense is the reduction of the importance of the imagination and an emphasis on the role of the understanding (this also addresses the neglect of the understanding and the categories in the A-Deduction).

§5.2.2. *The B-Edition*

The reduction of the role of the imagination in the B-Deduction to merely a function or effect of the understanding upon the manifold of sensibility has already been briefly addressed above.²¹ This demotion of imagination is also connected to the B-Edition’s rejection of the ‘amplification’ of inner sense that operated through the imagination and the related emphasis on the differentiation between inner sense and transcendental apperception. Kant initially emphasizes the problems of the relations between time, inner sense and apperception in a section added to the Aesthetic at B66-69. In this section Kant is primarily concerned with repeating his important argument for the ideality of outer and inner sense (space and time) and the consequence that the objects of sensibility (and cognition) are “mere appearances” (B66). This consequence is the same as the insight he stressed in his response to Lambert and Mendelssohn concerning their arguments against the ideality of time. In putting forward this

²¹ It is this limitation of the role of the imagination and of time in favour of the understanding in the B-Edition that Heidegger diagnoses, and laments, as Kant’s “shrinking back” from his insights into the power of the imagination as the ‘common root’ and also from fundamental temporality (1997, 112-120 [160-171]). Green describes Kant’s treatment of the imagination in the B-Deduction as a ‘transformation’ and ‘occlusion’ (139), and even echoes Heidegger’s indictment of ‘shrinking back’ when he argues that “By abandoning the proof-structure of the first-Edition, Kant pulled back from the amplified construal of inner intuition” (143).

argument, however, Kant also highlights the problems that are present in the Deduction. He observes that representations posited in the mind “can be nothing other than the way in which the mind is affected by its own activity, namely this positing of its representation, thus the way it is affected through itself, i.e., it is inner sense as far as regards its form” (B67-8). This directly connects self-affection and inner sense, but Kant immediately emphasizes that the self of this self-affection “can only be represented by its means as an appearance,” and warns that it cannot be admitted “if its intuition were mere self-activity, i.e., intellectual.” This distinction between the legitimate perception of the self as appearance and illegitimate intellectual intuition is the crux of the problem of self-affection, and Kant identifies it as such: “Any difficulty in this depends on the question how a subject can internally intuit itself; yet this difficulty is common to every theory” (B68): including his own account of transcendental idealism and the role that inner sense as the form of all appearances in general plays within it. Kant continues, and specifies how this relates to his own system and the arguments he puts forward later in the Transcendental Deduction: “Consciousness of itself (apperception) is the simple representation of the I, and if all of the manifold of the subject were given **self-actively** through that alone, then the inner intuition would be intellectual” (B68). Here Kant introduces the term ‘apperception’ to refer to self-consciousness in general, before its technical analysis and the distinction between empirical and transcendental apperception in the arguments of the Deduction (although, as this is the B-Edition, it is in a way preceded by the arguments of the A-Edition and its introduction there). He also specifies the dangers or the potential problem of self-consciousness: that if such consciousness is capable of giving the manifold of intuition by itself then it would be an intellectual intuition, which is explicitly prohibited by the negative elements of the Critical philosophy. This prohibition on an entirely self-active self-affection that provides a manifold of intuition reiterates Kant’s limitation of the role of self-perception in line with the ‘limiting condition’ of the inconstancy of inner sense and the arguments of the Paralogisms. In line with such a limitation, this section concludes by emphasizing how the self that is perceived through inner sense is only ever an appearance and not actually “as it is” in itself (B69). This reiterates and reinforces the earlier response that Kant made to the objections of Lambert and Mendelssohn to his argument for the ideality of time. But it also has consequences for the reformulation of the

Transcendental Deduction and the subtle shifts in Kant's arguments concerning the relation between space and time in the B-Edition of the *Critique*.

As noted, the B-Deduction reduces the role of the imagination and promotes that of the understanding. There are two reasons for this, firstly, the lack of argument about the specific role of the categories and the understanding in the A-Edition, which was a gap in its argumentation regardless of the problems of self-affection; and, secondly and in some ways more importantly, the emphasis on the understanding as the spontaneous and self-active faculty obviates the problems concerned with self-affection and the dangers of intellectual intuition, as the understanding does not function through passive sensibility but instead through the combination of synthesis alone. Thus, at the very beginning of the B-Deduction in the section he now numbers §15,²² Kant affirms the understanding, in distinct contrast to sensibility, as the spontaneous faculty capable of the combination of synthesis (B130). Although the understanding displaces the imagination as the most important faculty of synthesis, as with the A-Deduction, such synthesis is itself only possible because of a more primary unity that cannot come from either the unified representation of the manifold, nor from the concept of combination alone; and thus must be, as Kant argues, sought "someplace higher" (B131).²³ This 'higher' unity, which makes possible the capacity of the understanding to represent the unity of the manifold, is the unity of transcendental apperception. In a reversal of the A-Deduction, Kant, in §16, begins the argument of the B-Deduction with what he calls the "original-synthetic unity of apperception" (B131) and from there progresses to the other stages of the 'threefold synthesis'—the imagination and eventually apprehension.

A feature of the B-Deduction is Kant's continual reinforcement and reiteration of the differentiation between transcendental apperception and inner sense as part of his retreat from the 'amplification' of inner sense in the A-Deduction. Kant begins §16 with his most well known definition of apperception: "The **I think** must **be able** to accompany all my representations . . . all manifold of intuition has a necessary relation to the **I think** in the same subject in which this manifold is to be encountered"

²² Kant only adds numbers to the early sections of the *Critique* in the B-Edition.

²³ Green notes that the 'higher' location of this unity means that it is further removed from intuition (132n.126). This is part of Kant's avoidance of the 'amplified' account of inner sense from the A-Deduction (133).

(B132).²⁴ He takes care to specify that this unity of “pure” or “original” apperception and its recognition do not belong to sensibility and thus is differentiated from empirical apperception or inner sense. Again, in §18, where he argues that the transcendental unity of apperception is objective because it is “that unity through which all of the manifold given in intuition is united in a concept of the object,” he distinguishes this objective unity from “the **subjective unity** of consciousness, which is a **determination of inner sense**, through which that manifold of intuition is empirically given for such a combination” (B139). It is, however, in the second half of the B-Deduction that he makes the most detailed examination of this distinction. Here, Kant shifts from analyzing experience in general to an argument for the legitimacy of the application of the categories to the manifold of sensibility as set out in the Aesthetic, and thus from a consideration of the pure unity of apperception to a consideration of how the manifold of intuition is unified according to the categories.²⁵

The examination of the difference between inner sense and transcendental apperception occurs in §24, where Kant claims that,

Here is now the place to make intelligible the paradox that must have struck everyone in the exposition of the form of inner sense (§6 [i.e., in the Aesthetic]): namely how this presents even ourselves to consciousness only as we appear to ourselves, not as we are in ourselves, since we intuit ourselves only as we are internally **affected**, which seems to be contradictory, since we would have to relate to ourselves passively; for this reason it is customary in psychology to treat **inner sense** as the same as the faculty of **apperception** (which we carefully distinguish) (B152-3).

In this explicit consideration of the distinction between inner sense and transcendental apperception Kant once again asserts how inner sense only perceives the self as

²⁴ Green criticizes the ‘must’ of this statement, arguing that it only constitutes a “demand” for unity and not a “deduction” or “proof” (136-7).

²⁵ In the intermediate §21 Kant observes that so far he only has “the beginning of a **deduction**” and that he must now “abstract from the way in which the manifold for an empirical intuition is given” to argue for the connection between that empirical intuition and the categories of the understanding (B144). For a more detailed account of the ‘two step’ argument of the B-Deduction, which first argues for the application of the categories to experience in general in §§15-21 and then for their application to human sensibility and its objects in §§22-27, see Allison 2004, 159-63. The second stage of this ‘two step’ structure of the B-Deduction also (in §23) emphasizes the limitation of the use of the categories to experience that involves sensibility and thus is an experience of appearance and not things as they are in themselves (Guyer 2006, 104). This pre-empts the arguments of the Dialectic.

appearance, in line with the conclusion drawn from his response to Lambert and Mendelssohn in the Herz letter. Transcendental apperception, however, is not self-perception in the same technical sense of perception through sensibility that results in cognition.

In §25 Kant examines apperception and the self that it somehow perceives. He initially asserts that through apperception “I am conscious of myself not as I appear to myself, nor **as** I am in myself, but only **that** I am” and then qualifies this, stating that, “This **representation** is a **thinking**, not an **intuiting**” (B157). Kant distinguishes the I of apperception from both of the determinations that he used in the discussion of inner sense, namely the I as it appears and the I as it is in itself. The first distinction is significant because in differentiating the I that thinks from the I as perceived, Kant asserts that the former is not cognition in the strict sense that Kant uses the term (i.e., as a synthesis of sensibility and understanding). Because the I of apperception is not the I that is intuited by inner sense, it is not an object of intellectual intuition either, and here Kant explicitly asserts the “limiting condition that it [the I] calls inner sense, which can make that combination intuitable only in accordance with temporal relations” (B158). The second distinction—from the I as a thing in itself—is also important, as it differentiates Kant’s theory of apperception from Descartes’s theory of the *cogito*, there is no direct link from apperception as the I that is thinking to the ontological assertion of ‘I exist’ in the Cartesian sense. In part, this is due to different accounts that Kant and Descartes give of existence, most evident in Kant’s objection to the ontological argument that ‘existence is not a real predicate.’²⁶ Now, the two distinctions come together, as Kant’s account of existence, in this sense, does not define it as a predicate, which means that it is not a determination of sensibility by the understanding through the category of existence, as such determination can only ever be for objects of cognition. Instead, Kant argues that, “The **I think** expresses the act of determining my existence. The existence is thereby already given, but the way in which I am to determine it, i.e., the manifold that I am to posit in myself as belonging to it is not yet thereby given” (B157n). The act of thinking requires the existence of some as yet undetermined thing that is thinking, but the claims that can be made about

²⁶ Kant explicitly contrasts the ‘I think’ of apperception with Descartes’s *cogito* in the B-Edition version of the Paralogisms at B422n (see also Allison 2015, 397).

this thinking, until there is some determination through sensibility, remain minimal. As Kant expresses it, “I merely represent the spontaneity of my thought, i.e., of the determining, and my existence always remains only sensibly determinable, i.e., determinable as the existence of an appearance. Yet this spontaneity is the reason I call myself an **intelligence**.” (B158n). The spontaneity in question here is like the spontaneity through which the understanding also synthesizes the manifold into cognition, but is as yet itself undetermined. It thus makes possible, but is not the same as, the determinate inner intuitions of the self as it appears in time and through cognition, and yet it *is* only insofar as it undertakes these actions of thinking and is thus itself capable of being cognized through inner sense.

The clarification of transcendental apperception in §25 explicitly reinforces the ‘limiting condition’ of inner sense as concerned time. This reinforcement recalls the argument from the inconstancy of time put forward in the Aesthetic and the A-Paralogisms, but it also prompts some questions about the exact nature of inner sense, especially concerning how it is related to the ‘threefold synthesis’ through which sensibility and understanding become cognition and experience—to know the limitation of inner sense, its ‘bounds’ to use the language examined in Chapter 4 above, it is also necessary to know about inner sense and its function and role in cognition. This was, in fact, precisely the context, in §24, in which Kant called attention to the ‘paradox’ of self-perception and the need to distinguish inner sense from apperception. More specifically this examination of inner sense (and its differentiation from apperception) occurred as a result of Kant’s introduction of the synthesis of the imagination as he works back through the ‘threefold synthesis’ to demonstrate how the categories can be applied to sensibility and empirical experience. Kant transitions from his examination of apperception earlier in the B-Deduction to address the specific sensibility that makes up experience with the argument that,

since in us a certain form of sensible intuition *a priori* is fundamental, which rests upon the receptivity of the capacity for representation (sensibility), the understanding, as spontaneity, can determine inner sense through the manifold [*den inneren Sinn durch das Mannigfaltige*] of given representations in accord with the synthetic unity of apperception, and thus think *a priori* synthetic unity of apperception of the manifold of **sensible intuition**, as the condition under

which all objects of our (human) intuition must stand, through which then the categories, as mere forms of thought, acquire objective reality (B150, translation modified).²⁷

This argument, and those of the remainder of the B-Deduction, thus forms the direct bridge between the understanding and sensibility; and sets out the means and legitimacy through which the categories, forms of thought, are filled (that they are no longer ‘empty’) with the material given by sense, and inversely, how sensibility can ‘see’ (it is no longer ‘blind’) its objects as objects rather than merely undetermined sensation.²⁸ However, in line with the structure of Kant’s general argument in the B-Deduction, this argument once again emphasizes the role of the understanding as the active component of this process of cognition, which can spontaneously determine inner sense in accordance with the unity of apperception.

In the B-Deduction the transcendental synthesis of the imagination is the mechanism or means through which the understanding affects and combines the manifold of sensibility given in inner sense. Kant variously describes imagination as “an effect of the understanding on sensibility” (B152) and the “synthetic influence of understanding on inner sense” (B154). Descriptions like these are evidence of the demotion of the role of the imagination and the mitigation of the ‘amplification’ of inner sense in the B-Deduction, as it is no longer a spontaneous faculty but rather only a function of the understanding, or as Kant describes it an “exercise of spontaneity” (B153). This demotion does not, however, mean that the role of the imagination is not important, or problematic, in the B-Deduction. Its role, as in the A-Deduction, is the *a priori* synthesis of the manifold of sensibility into a unified and objective experience (a synthesis that Kant calls “**figurative** (*synthetis speciosa*)” as opposed to a pure intellectual or conceptual synthesis of the understanding alone (B151)). Kant once again specifies that imagination is “the faculty for representing an object even **without its presence** in intuition” (B151), and similarly distinguishes between the ‘productive’ imagination, which is the operation of the spontaneity of the understanding, and the ‘reproductive’ imagination that represents elapsed empirical perceptions and thus

²⁷ The Guyer and Wood translation misses out the reference to ‘inner sense.’ On this passage, and the modification of the translation see Allison 2015, 380.

²⁸ The metaphors in question here use the terminology of Kant’s famous assertion that “Thoughts without content are empty, intuitions without concepts are blind” (A51/B75).

cannot contribute to an “explanation of the possibility of cognition *a priori*, and on that account belongs not to transcendental philosophy but in psychology” (B152). It is in the context of this distinction that Kant addresses the ‘paradox’ of the relation and differentiation of inner sense and transcendental apperception. Kant’s criticisms of the ‘systems of psychology’ is that they equate the self that appears through the empirical experience of reproductive imagination and the transcendental unity of apperception as the source of the possibility of *a priori* cognition. Thus they attempt to use the appearance of the self in inner sense to make inferences about the unity of apperception and the possibility of cognition, which is, in Kant’s argument, illegitimate. This mistake is similar to the errors addressed in the Paralogisms, which, as cases of subreption, are concerned with the application of the forms of sensibility to an object that is postulated by reason alone, beyond the bounds of sensibility (see the discussion of the Dialectic in Chapter 2 above). If this distinction avoids the problems of rationalist psychology, it must do so by not just elaborating apperception in terms of the spontaneous intelligence that thinks, but it must also delineate the role of imagination as the mediator between empirical experience and its transcendental conditions of possibility and thus complete the task of the Deduction.

In setting out the transcendental action of the imagination, or the figurative synthesis as he also calls it, Kant makes recourse to the familiar image of a line:

We cannot think of a line without **drawing** it in thought ... and we cannot even represent time without, in **drawing** a straight line (which is the external [*äußerlich*] figurative representation of time), attending merely to the action of synthesis of the manifold through which we successively determine inner sense, and thereby attending to the succession of this determination in inner sense ... the understanding therefore does not **find** some sort of combination of the manifold already in inner sense, but **produces** it, by **affecting** inner sense (B154).

Despite the reduction of the role of the imagination in the B-Deduction (and this section presents another statement of its dependence upon the understanding) this use of the line is very similar to that presented in the A-Deduction. The action of *drawing* a line in thought emphasizes the productive nature of imagination as a synthesis that makes possible the combination of any representations. It also emphasizes the temporal element of this synthesis as a determination of inner sense. Unlike the A-Deduction’s ‘amplified’ version of inner sense, this synthesis and determination is not

an operation of inner sense itself but rather an effect produced by the understanding through the imagination. Kant uses this analysis and the reduced version of the synthesis of imagination to once again emphasize the distinction between transcendental apperception and inner sense as the I that thinks and the I that intuits itself (as appearance) respectively.

In emphasizing this distinction and the limitations that it places on inner sense and self-perception, Kant also returns to the argument that he made in the Herz letter in response to Lambert and Mendelssohn's criticisms of the *Inaugural Dissertation* about the parallels between outer and inner sense. In the final lines of §24 Kant makes the same conclusions as he did in his earlier response:

hence if we admit about the latter [outer sense] that we cognize objects by their means only insofar as we are externally affected, then we must also concede that through inner sense we intuit ourselves only as we are internally affected **by our selves**, i.e., as far as inner intuition is concerned we cognize our own subject only as appearance but not in accordance with what it is in itself (B156).

Kant emphasizes that inner sense, even as self-affectation, only ever reveals a self as an appearance and never as it is in itself, which was an important element of his response to Lambert and Mendelssohn and a preliminary step in the development of transcendental idealism. However, the preceding argument that sets up this conclusion is more ambiguous than this (repeated) conclusion. Kant argues that,

from the fact that time, although it is not itself an object of outer intuition at all, cannot be made representable to us except under the image of a line, insofar as we draw it, without which sort of presentation we could not know the unity of its measure at all, or likewise from the fact that we must always derive the determination of the length of time or also of the positions in time for all inner perceptions from that which presents external things [*äußere Dinge*] to us as alterable; hence we must order the determinations of inner sense as appearances in time in just the same way [*auf dieselbe Art*] we order those of outer sense in space [*äußeren Sinn im Raume*] (B156).

This argument goes beyond a mere parallel between outer and inner sense as two forms of sensibility, which can thus only produce appearances, and makes a stronger connection between them. This connection comes in a stronger reassertion of the argument that Kant made in the Aesthetic that in order to 'remedy' the inconstancy and 'lack of shape' of time it is represented through the analogy of a line progressing to

infinity (A33/B49-50). The argument that Kant makes in the B-Deduction, however goes beyond mere analogy between time and space—the ordering “in the same way” that Kant concludes with—and asserts that time is in fact determined from the presentation of “external things as alterable.” This extension of the importance of outer sense and space from the analogy of the line in the Aesthetic to a determining role via the figurative synthesis of the imagination in the B-Deduction not only seems to contravene the heterogeneity between time and space set out in the Aesthetic, but goes so far as to assert a fundamental interdependence between them. Closer consideration, however, reveals that such interdependence is actually only possibly through the maintenance of the difference and heterogeneity between time and space, as it is precisely because of the difference in form (i.e., the simultaneity of space versus the inconstant flux of time) that space can provide a determination of time. It is only because of the ‘limiting condition,’ which Kant explicitly restates at B159 soon after this conclusion, that it requires the ‘analogy’ of space to determine it.²⁹

The interdependence between time and space suggested by the image of the line, and as explicitly stated by Kant, foreshadows the argument of the Refutation of Idealism,³⁰ but at this stage in the B-Deduction it only complicates the already obscure doctrine of inner sense and the role of time-determination in the arguments of the Deduction. Green even goes so far as to lament that “these most complex final sections of the second-Edition Deduction discourage hope for an immediate or crystalline comprehension of this doctrine [of inner sense]” (167). The complexity of these final sections of the B-Deduction, as well as the shifts between it and the ‘amplifications’ of the earlier A-Deduction, reveal the problematic nature of the doctrine of inner sense and the related issue of time and time-determination. In many ways, this problematic nature of inner sense and time can be interpreted as the central problem of the Deduction. This interpretation, that inner sense and the issue of time-determination are the central problems of the Deduction, was suggested at the start of this examination in relation to the ‘general remark’ at A99, the analysis of the Analogies in Chapter 3 above and the interpretation put forward by Guyer that supports and influences this

²⁹ For a close interpretation of these sections of the B-Deduction and their implications for the ‘heterogeneity thesis’ about time and space see Green 156-65, where he sets this out in terms of what he calls “the most basic tension in the first *Critique*” (156).

³⁰ This foreshadowing is noted several times by Green (156 & 167).

analysis. Guyer's analysis is once again pertinent, for insofar as Green characterizes these final sections as 'complex,' Guyer finds in them, and in §26 in particular, an "alternative strategy for demonstrating the objective validity of the categories" (2006, 105). This 'alternative strategy' revolves around the problem of inner sense—as intuition and thus appearance rather than the 'amplified' version of the A-Deduction—and the problem of time-determination within inner sense, and thus leads to the problems that Kant will eventually address in the Refutation of Idealism.

In §26 Kant moves to the final stage of the 'threefold synthesis' (as it is presented in the B-Deduction): the synthesis of apprehension. This was the stage where he asserted the priority of inner sense in the 'general remark' of the A-Deduction; the treatment of the B-Deduction is, however, somewhat different. In line with his general strategy of promoting the understanding and minimizing the role of sensibility in the B-Deduction, Kant again argues that the unity of the manifold provided by sensibility in terms of time and space—i.e., the synthesis of apprehension—"presupposes a synthesis, which does not belong to the senses but through which all concepts of space and time first become possible" (B161n.). This synthesis, and the synthetic unity that it provides, is, of course, "none other than that of the combination of a given **intuition in general** in an original consciousness, in agreement with the categories, only applied to our **sensible intuition**" (B161). It is the categories that underpin the possibility of the synthesis of apprehension and the combination of sensations into a manifold of sensation that makes up the experience of determinate objects. Kant provides two examples of how specific objects and experiences are only perceived through the determination of intuitions by categories. These examples are the perception of a house in space which, Kant argues, depends upon the category of magnitude [*Größe*] in order to ground the synthetic unity of space, and the perception of the change over time as water freezes, which depends upon the category of cause to determine the relation of the temporal sequence (B162-3).³¹ It is through these arguments about the necessity of the categories for the synthesis of apprehension and thus the application of the

³¹ These examples are similar to those given in the Analogies, where Kant considers both the perception of a house as a whole and the movement of a ship upstream (A190-3/B235-8). This section in the B-Deduction thus both pre-empts the argument of the Analogies (as the B-Edition is read) and imports their argument into the rewriting of the Deduction (as Kant writes the B-Edition with the A-Edition version of the Analogies already before him).

categories to the objects of appearance, such as the house and freezing water, that the ‘alternative strategy’ postulated by Guyer operates. For just as the categories must be necessary for the apprehension of the appearances of the house and the freezing water as examples of outer and inner sense, insofar as one must be determined in space and the other in time, so too must the categories be applicable to the self that is intuited through inner sense in terms of self-perception, which Kant has explicitly argued is also an appearance earlier in the B-Deduction. As Guyer summarizes concisely:

if Kant could argue that the use of the categories is a necessary condition for any determinate knowledge of objects in space and time, *and then show us that self-knowledge is also determinate knowledge of an object in space and time*, he could finally show us that the categories are necessarily involved in self-knowledge as well as in knowledge of objects other than the self (2006, 106).

The ‘alternative strategy’ functions through grounding the necessity and legitimacy of the categories on the spontaneous self-knowledge that is gained through empirical perception of the self—as appearance—through inner sense as opposed to the unity of apperception. This avoids the problems of the ‘amplified’ account of inner sense from the A-Deduction, as it includes the lessons learned in the B-Deduction and the necessity of the ‘limiting condition’ provided by the inconstancy of time. But it is precisely this issue of time-determination that becomes the important and pertinent question of this empirical perception of the self through inner sense.

The ‘alterity’ of this strategy lies in the fact that it takes the self-perception of inner sense and the empirical appearances as primary rather than the unity of apperception in terms of the ‘I think.’ Although he never describes it as such in that work, Guyer provides an expanded account of this ‘alternative strategy’ in *Kant and the Claims of Knowledge* (1987). In that account, Guyer rethinks the relation between the two forms of self-perception—inner sense and apperception—and, as identified in footnote 20 of the analysis of the A-Deduction above, argues that the unity of apperception as Kant describes it is only a conditional necessity that depends upon a relation between thoughts that can only be provided from another source, namely the determination of time in inner sense. Guyer argues directly that, “apperception involves an awareness of the temporal succession of representations, and thus ... the conditions for determining such a succession are necessary conditions for the consciousness of apperception

itself” (1987, 150). Guyer’s argument recognizes the proximity between inner sense and apperception, which Kant in his enthusiasm for his argument for the unity of apperception as the fundamental base of transcendental idealism carefully and forcefully tried to pull apart. In contrast, Guyer emphasizes empirical inner sense and the issue of time-determination that it entails as the ‘real premises’ (as the title of Chapter 3 of *Kant and the Claims of Knowledge* puts it) of the Deduction.

§5.3. *The Problems of Time-Determination*

Guyer uses a set of *Reflexionen* from 1774-75, known as the *Duisburg Nachlaß* (R4674-R4684; 17: 643-72), as well as a close interpretation of the two versions of the Deduction, to argue that Kant initially envisaged the argument that became the Transcendental Deduction in terms of the problem of time-determination.³² This interpretation stresses the importance of the ‘fundamental premise’ at A99 as well as the developments in the final sections of the B-Deduction. Kant, in Guyer’s analysis, abandoned the first formulation of the argument concerning time-determination set out in the *Duisburg Nachlaß* and replaced it in the A-Deduction with the argument from apperception as the *a priori* and purely intellectual spontaneous knowledge of the necessary unity of the self (1987, 131). The problems encountered in the A-Deduction, however, and the proximity between apperception and inner sense—Guyer argues that in the *Duisburg Nachlaß* they were not so distinct as apperception had not acquired the technical form it has in the *Critique*³³—resulted in the abundance of arguments that Guyer finds in the Deductions, only one of which is ultimately successful: The ‘alternative strategy’ that works from the “*A priori* conditions of empirical self-

³² In addition to Guyer’s discussion of these *Reflexionen*, see also Laywine (2006) for an account of the development of Kant’s thought in the 1770s and the precise nature of the *Duisburg Nachlaß*.

³³ This proximity is particularly evident in R4674, where Kant directly asserts that, “Apperception is the consciousness of thinking, i.e., of the representations as they are placed in the mind” which includes, among other things, “the relation of succession [*Folge*] among one another” (17: 647; see also R4677; 17: 659). See Guyer 1987 page 150 for his analysis of this section. Also see Guyer page 131 for his argument that Kant abandoned the argument about time-determination because of his discovery of “what he thought was a simple but powerful argument” from the unity of transcendental apperception.

knowledge” and develops in terms of the possibility of time-determination (1987, 149-54).³⁴ This strategy is not, however, completed within the confines of the Deduction alone and requires the arguments that Kant develops in the sections of the *Critique* immediately after the Deduction in what Kant titles the Analytic of Principles: the Schematism, Analogies and ultimately the Refutation of Idealism.³⁵

The Analytic of Principles is concerned with the “**power of judgment**” and the application of the concepts of the understanding to appearances (A132/B171). As such it develops the strategy outlined in the final sections of the B-Deduction, which was concerned with the synthesis of apprehension and thus the connection between the categories and the actual empirical objects of perception. In the terms of the task of the Deduction (and for both the rest of this analysis of Kant and also the confrontation with the criticisms and system of Meillassoux) the important development in these final stages of the Deduction is the recognition that the perception of the self, through inner sense, also has an appearance as its object, and that this appearing self, which is perceived self-actively, is determined by the categories in the same way as the objects of outer sense, which are given passively. By recognizing that the self perceived by inner sense is always and only an appearance, Kant maintains the ‘limiting condition’ revealed by the inconstancy of time that prevents direct intellectual intuition of the self, but also prompts the question of the conditions of the determination of time in inner sense, and it is this question that the Analytic of Principles confronts. It is thus in the chapter On the Schematism of the Pure Concepts of the Understanding that Kant directly addresses the issue of time-determination.

³⁴ Guyer presents several notes as evidence of Kant’s recognition of the importance of inner sense and time-determination between the two Editions of the *Critique* (1987, 87-8). Firstly, a marginal note in his own copy of the A-Edition that asserts the connection between time and all appearances (23: 18); and secondly, two *Reflexionen* from the mid 1780s (R5636 and R5637), which assert that all representations are “modifications of inner sense” (18: 267-8, a restatement of A99) and that time as given subjectively and *a priori* as the form of inner sense is necessary for otherwise “apperception would not cognize the relation in the existence of the manifold *a priori*” and also emphasizes that time cannot be derived from objects and is thus transcendental (18: 271). All of these intermediate notes present elements that are central to the importance of inner sense and time-determination in the ‘alternative strategy’ or ‘real premises’ of the Deduction developed out of the analysis of the B-Deduction and the *Duisburg Nachlaß*.

³⁵ As Guyer argues, “the major work of Kant’s transcendental deduction remained to be done even after the chapter officially devoted to it” (1987, 157).

§5.3.1. *The Schematism*

In the Schematism, Kant investigates how empirical objects can be subsumed under a concept, and thus, he searches for a “third thing, which must stand in homogeneity with the category on one hand and appearance on the other, make makes possible the application of the former to the latter” (A138/B177). As such, he revisits in part the official question of the Deduction, how sensibility and understanding are connected: not directly from sensibility, but rather from the sort of objects of experience with which he ended the B-Deduction. Kant names the ‘third thing’ that is homogenous with both objects and categories the transcendental schema, and after arguing that time is both the formal condition of the manifold of inner sense and also homogenous with the category insofar as it is “**universal** and rests on a rule *a priori*,” he concludes that, “hence an application of the category to appearances becomes possible by means of the transcendental time-determination which, as the schema of the concept of the understanding, mediates the subsumption of the latter under the former” (A139/B178). Although time was at the heart of many of the arguments of the Deduction, this is the first instance where Kant refers to “time-determination” explicitly. The Schematism is largely unchanged between the two Editions of the *Critique* and can be interpreted slightly differently with regards to each. On one had, it is in line with the ‘amplification’ of the role of time and inner sense from the A-Deduction; and yet, on the other hand, as it is concerned with sensible conditions and thus only *appearances*, it does not contravene the ‘limiting condition’ of the B-Deduction. This ambiguity does not infringe the ‘alternative strategy’ for the project of the Deduction via empirical self-perception that Guyer identifies in the final sections of the B-Deduction. Indeed, the Schematism builds upon the brief discussion of the synthesis of apprehension that was provided in those sections; and thus the link to A99 and the discussion of apprehension in the A-Deduction is not coincidence, but rather a return to the order of cognition of the ‘threefold synthesis’ that was set out in the Metaphysical Deduction and which structured the A-Deduction. Thus Kant also returns to the primacy of sensibility in empirical experience:

the modification of our sensibility is the only way in which objects are given to us; and, finally, that pure concepts *a priori*, in addition to the function of the understanding in the category, must also contain *a priori* formal conditions of sensibility (namely of inner sense) that contain the general condition under which alone the category can be applied to any object (A139-40/B178-9).

This argument reinforces the importance of the sensible element of cognition, which was obscured in the B-Deduction by the emphasis on the understanding, and especially the determination of inner sense through its synthesis, but which briefly re-emerged in the final sections. It is the formal condition of sensibility, and specifically inner sense and thus time—that is, how the concepts of the understanding are applied empirically—and it is this practical application that Kant calls the schema. The schematism of the title of the chapter is the procedure through which the pure understanding uses these concepts. Kant emphasizes the connection between the schema and time-determination throughout the Chapter, and in doing so he also proceeds through the order of cognition set out by the ‘threefold synthesis,’ and re-examines the role of imagination. Setting out the role of the schema in the context of the structures expressed in the Deduction he defines it as:

the pure synthesis, in accord with a rule of unity according to concepts in general, which the category expresses, and 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 together *a priori* in one concept in accord with the unity of apperception (A142/B181).

The schema thus adds another element to the order and operation of cognition alongside those of the ‘threefold synthesis’ outlined in the Deduction. It also makes explicit and clarifies the importance of time-determination in the structures of the Deduction in a way that the Deduction itself never did but merely hinted at, when treating the syntheses of the imagination and apprehension. The Schematism chapter recognizes the problem of time-determination that underpins empirical experience, but it does not completely solve this problem. Despite these analyses and arguments, time-determination, and its relation to inner sense as self-perception, remains problematic. These problems of time-determination and its relation to the self and self-perception, are evident, and emphasized, by Kant’s somewhat enigmatic assertion that the schematism “is a hidden art in the depths of the human soul, whose true operations we

can divine from nature and lay unveiled before our eyes only with difficulty” (A141/B180-1). Kant declines to pursue this difficult task, characterizing it as “a dry and boring analysis” (A142/B181). Leaving the schematism unelaborated and ‘hidden in the human soul’ makes Kant’s theory of transcendental time-determination more obscure than clear, but nonetheless, it identifies the nexus of time-determination and the self, or the soul, as an important problem within his system. This connects back to the two forms of self-perception—apperception and inner sense—that Kant so carefully differentiated in the B-Deduction, but which here in the Schematism are once again unelaborated. In summarizing the role of the schematism of the understanding, Kant argues that it, “through the transcendental synthesis of the imagination comes down to nothing other than the unity of the manifold of intuition in inner sense, and thus indirectly to the unity of apperception, as the function that corresponds to inner sense (to a receptivity)” (A145/B184-5). This statement draws together inner sense and apperception in a way that is now somewhat ambiguous. It can be interpreted either in terms of the ‘amplification’ of the A-Deduction that makes inner sense an intellectual intuition capable of grounding knowledge,³⁶ or, it can be interpreted in line with the B-Deduction and the ‘alternative strategy’ that argues that apperception, as self-perception, is itself only possible through the temporal relations of empirical experience (of the self as appearance) determined in inner sense. Either way, the importance of time and time-determination and the connection between it and the perception of the self becomes an especially pertinent issue within Kant’s philosophical system and any interpretation of it.

§5.3.2. Time-Determination in the Critique and the Issues Raised by Meillassoux

What is left obscure, hidden and unelaborated in the Schematism is to a degree clarified in the System of All Principles of Pure Understanding, the section of the *Critique* that examines precisely how the categories are applied to experience. It is this section that contains the Analogies of Experience and Kant’s treatment of the

³⁶ Such an “amplificative” interpretation of the Schematism is suggested by Green (176).

categories of relation, which Guyer argues completes the theory of transcendental time-determination hinted at and even ‘promised’ by the *Duisburg Nachlaß*.³⁷ The Principles of Pure Understanding comprises four parts, which relates to the division of the Table of Categories into four. Of these, the Analogies of Experience, and its treatment of the categories of relation and reconfiguration of the principle of sufficient reason (see §3.4 above), makes up the most substantial part of the Principles, while the Axioms of Intuition (categories of quantity), Anticipations of Perception (categories of quality) and Postulates of Empirical Thinking in General (categories of modality) are given comparatively brief treatments. As argued in Chapter 3 above, the Analogies of Experience contains Kant’s analysis of time in terms of its three modes, persistence, succession and simultaneity as determined by the three categories of relation: [1] inherence and subsistence, [2] causality and dependence and [3] community. The Principles in general, however, are all concerned with time-determination, as Kant explicitly states in his introduction to them: “There is only one totality [*Inbegriff*] in which all of our representations are contained, namely inner sense and its *a priori* form, time” (A155/B194). Green argues that this is a continuation of the ‘amplification’ of the role of inner sense from the Deduction (173). In line with the ‘alternative strategy’ that is being followed here, this should be restated as not the more technical sense of ‘amplification’ from the A-Deduction, but only in terms of an emphasis on the importance of time, now tempered by a recognition of the ‘limiting condition’ of inner sense insofar as it yields only appearances (and not intellectual intuition). This is not to say that it cannot achieve the aim of the Deduction. Indeed, the System of All Principles of Pure Understanding are only concerned with empirical experience—through what Longuenesse termed the ‘phenomenological step’—and thus with representations or appearances, which includes, even if it is not explicitly addressed, the self as appearance perceived through the self-activity of inner sense.

³⁷ This argument is part of Guyer’s wider argument that Kant sets out time-determination as the ‘real premise’ of the Deduction. He references several notes in the *Duisburg Nachlaß* where Kant puts forward the need for “analogies of appearance” (R4682; 17: 668-9), and even explicitly “three analogies of experience” (R4675; 17: 648) that determine time and give objective reality to experience. Guyer refers to the second of these *Reflexionen* as a “promissory note” for the Analogies of Experience as they appear in the *Critique*, where they elaborate time-determination through the three categories of relation (1987, 45).

Chapter 3 above was primarily concerned with how Kant develops a Critical reconfiguration of the principle of sufficient reason and thus confronted Hume's problem in terms of time, and how this connected to his earlier criticisms of the principle of sufficient reason and dogmatic metaphysics in the *New Elucidation*. The analysis and interpretation of the Aesthetic and Deduction presented here, argues that the issue of the possibility of time-determination is central to the argument of the *Critique* as a whole and the account of objective legitimate knowledge that it provides. However, insofar as this problem of time-determination is central to the *Critique*, it nonetheless remains problematic in its connection to inner sense, the connection to apperception and the dangers of intellectual intuition. The focus on time-determination and this nexus of issues both returns to Meillassoux's interpretation and criticism of Kant and also the focus on time and the disruptions of space in his own alternative system that he developed out of those criticisms.

What is immediately obvious in considering Meillassoux's criticisms of Kant and the interpretation of the Deduction offered here is that the focus on the subjective unity of apperception as that which grounds and legitimizes all objective knowledge and experience, appears to confirm the criticism of Kant as 'correlationist.' It is noteworthy then, that Meillassoux never discusses or mentions apperception in *After Finitude*.³⁸ Instead, in the section where he explicitly addresses the nature of the subject in terms of the potential 'correlationist rejoinders' to the challenge of 'ancestrality,' he uses the terminology of the 'transcendental subject'" (22-6; see §3.3.1 above). Kant only uses this particular formulation in the Paralogisms, where he is criticizing rationalist psychology and its attempts to treat the soul as an object in time and space that is known entirely through intellectual intuition. The transcendental subject that Kant discusses in the Paralogisms is not, however, the subject that he connects with apperception in the Deduction, rather it is the object of the doctrine that is "falsely held

³⁸ Apperception is mentioned in passing in Meillassoux's contribution to *Collapse* (Meillassoux 2007) as that which unifies the 'empirical *datum*' with the 'categorical *factum*' and is the moment of the transcendental deduction. This passing mention, however, is not the main object of the passage in which it occurs, which is instead concerned with Laruelle's 'concept of philosophy' and thus does not examine apperception in any detail (415). In his exegesis of Meillassoux's argument in *Nihil Unbound*, Brassier also mentions apperception when he asserts that for Kant, "Synthesis is rooted in pure apperception, which yields the transcendental form of the object as its necessary correlate and guarantor of objectivity" (51), which explicitly connects apperception to the subjective side of the correlation.

to be a science of pure reason about the nature of our thinking being” (A345/B403). As the above analysis of the Deduction and the problems associated with apperception and inner sense reveals, there is undoubtedly an element of confusion and interaction between the arguments of the Paralogisms and the Deduction and the notions of the self and self-consciousness put forward therein. Recognizing these tensions as problematic in the *Critique* and examining the way in which Kant attempts to deal with these problems across the two Editions of thus provide a way to address Meillassoux’s criticisms of Kant.

As was argued in §3.3.2 above, the discussion of the Deduction that Meillassoux undertakes is situated in the context of his discussion of Hume’s problem and explicitly addresses the ‘objective deduction’ of the A-Edition. Nonetheless, Meillassoux’s interpretation of the Deduction does confront some of the issues brought out by the analysis provided here and these similarities, as well as the parallels put forward in Chapter 3, provide the means to reassess the charge of ‘correlationism’ and the philosophy of Kant; ultimately in terms of the issue of the relation between time and space that structures this thesis. At the start of his examination of the Deduction in *After Finitude*, Meillassoux summarizes Kant’s argument as the following: “There can be no consciousness without the possibility of a science of phenomena, because the very idea of consciousness presupposes the idea of a representation that is unified in time” (93).³⁹ This single sentence summary recognizes several important elements that have also been identified above in the Deduction. Firstly, the role of consciousness, albeit without any reference to apperception of self-consciousness or the subjectivity of ‘correlationism;’ and secondly, the issue of temporal unity, which recalls the emphasis placed on time at A99 at the start of the A-Deduction and Kant’s description of it in terms of the only “totality [*Inbegriff*]” in the introduction to the Principles. Meillassoux, however, despite his own temporal philosophy, does not focus on this importance of time in the Deduction, nor does he connect the issue of temporal unity to the unity of the self. Instead he takes the idea of temporal unity to stand in for the “stability of phenomena” which “provides the condition for consciousness as well as for a science of nature” (93), which reflects the wider context of Hume’s problem that

³⁹ Meillassoux’s reference to Jacques Rivelaygue’s “linear commentary of the objective deduction of 1781,” is appended to this sentence (134n.5, see footnote 4 above)

frames his discussion of the Deduction. These connections between time and the self—and by extension the tensions of inner sense as a “difficulty common to every theory” (B68)—which Meillassoux fails to treat in any detail, are the means through which his criticism of Kant as ‘correlationist’ can be confronted. Furthermore, the resolution that Kant eventually provides for these problems in the Refutation of Idealism, has also been prefigured by Meillassoux’s explicit rejection of the Refutation and the tension between time and space in Meillassoux’s own system.

The analyses of the Aesthetic and Deduction presented so far emphasize the problematic nature of inner sense and thus time within Kant’s system of transcendental idealism. The problems of inner sense are somewhat similar to the criticisms put forward by Meillassoux under the charge of ‘correlationism,’ but also present a different approach to their problematic nature insofar as they are now focused on time and time-determination. It is through this different approach to these problems, and also the ‘alternative strategy’ of the Deduction, that the developments of the Refutation of Idealism are now addressed, not as a simple rejoinder to the charges of ‘correlationism’ and idealism, but as a resolution of the problems of inner sense and time-determination. The emphasis on self-consciousness in the two versions of the Deduction, and the priority that it gives to the subject as the foundation of objective knowledge and experience, seems, in the absence of detailed interrogation, to support Meillassoux’s charge of ‘correlationism.’ This is more pronounced in the A-Deduction, with its ‘amplification’ of inner sense, but is also evident in the first half of the B-Deduction and its focus on apperception as a subjective ground for objective knowledge. Even the ‘alternative strategy’ of the later sections of the B-Deduction, which takes into account the distinction between inner sense and apperception and the necessity of the ‘limiting conditions’ of the former, still prioritizes inner sense and the empirical perception of the self as the foundation of the argument of the Deduction. This prioritization of inner sense explicitly at the expense of outer sense seems to confirm Meillassoux’s statement that ‘correlationist’ thinkers, including Kant, “have lost the *great outdoors*, the *absolute* outside of pre-critical thinkers” (2008a, 7). To equate these two senses of ‘outer’ is, however, somewhat problematic as Kant’s use of ‘outer sense’ is, at least in the A-Edition, explicitly only concerned with the experience of things in space, the ‘empirical sense,’ and not the existence of distinct objects separate to the subject, the ‘transcendental sense,’ which is presumably what

Meillassoux means when he speaks of the ‘great outdoors.’ Kant’s assertion that he is only concerned with the ‘empirical’ outside once again relates to Meillassoux’s analysis of the ‘radical exteriority’ of ‘correlationism,’ which asserts that there are things ‘outside’ but only ever in an ‘outside’ that is correlated to the subject. Despite this criticism of ‘radical exteriority,’ Kant’s distinction between these two senses of ‘outside’ means that his use of ‘inner,’ and the entire distinction between inner and outer, must be regarded more closely; and in such close interpretation, it is the use of inner and outer sense to refer to the forms of sensibility of time and space that becomes important. This importance is accentuated in light of the problems concerning time and space that are present in Meillassoux’s positive philosophy. It is precisely the issue of the determination of time, even down to his use of the analogy of the straight line, that presented problems for reconciling the chronology of ‘ancestrality’ with the time of ‘hyper-chaos.’ Time-determination is also key to the addition of the Refutation of Idealism in the B-Edition of the *Critique*, which must now be interpreted not simply as a rejection of idealism, but as an elaboration of the doctrines of inner and outer sense in terms of time and space, and as such a confrontation with the problems of the Deduction and a completion of the ‘alternative strategy’ that aims to resolve the problems of the Deduction through the doctrine of transcendental time-determination. The account to be presented here of the Refutation asserts and argues for the centrality of space alongside time in Kant’s system, a development that has implications for the problematic relation between time and space in Meillassoux’s system.

§5.4. *The Refutation of Idealism*

Kant adds the Refutation of Idealism to the B-Edition of the *Critique* and identifies it as “The only thing I can really call a supplement” (Bxxxix, footnote). In it he provides “a strict proof ... of the objective reality of outer intuition” against what he calls:

a scandal of philosophy and universal human reason that the existence of things outside us [*Dinge äuser uns*] (from which we after all get the whole matter for our cognitions, even for our inner sense) should have to be assumed merely **on faith**, and that if it occurs to anyone to doubt it, we should be unable to answer him with a satisfactory proof (Bxxxix, footnote).

Kant's vehement denunciation of idealism—a 'scandal of philosophy'—most likely lies in the fact that early reviews of the A-Edition of the *Critique*, such as that of the *Göttingen Review*, accused it of lapsing into subjective idealism (see Chapter 1 footnote 4 above). The refutation that he actually provides, however, has wider implications for his philosophical system.⁴⁰ Already in this brief introduction, the way that it interacts with the interpretation of the *Critique* offered so far is readily apparent. In setting out the problem of idealism in terms of "things outside us" and their relation to "our cognitions" including, importantly, "inner sense" the problematic relation between space and time as the two forms of sensibility, the problems of inner sense in the Deduction and the equivocation in the term 'outer,' come to the fore. Thus, in addressing idealism, Kant also clarifies his doctrine of inner sense and time and its relation to outer sense and space, ultimately in such a way that reveals the centrality of space, alongside time, within his Critical system. Furthermore, in Guyer's analysis, the Refutation of Idealism provides an argument that attempts "The actual accomplishment of the several goals of Kant's deduction of the categories" via the 'alternative strategy' of the final sections of the B-Deduction, by completing Kant's theory of transcendental time-determination (1987, 279). As a result, the Refutation of Idealism holds the key to the questions asked in this thesis and the answers that Kant provides to them.

The argument presented in the Refutation of Idealism in the B-Edition is not entirely new to that Edition, as it is largely a reworked version of the Fourth Paralogism of the A-Edition. Similarly, the Refutation is not Kant's final and definitive statement on the matter. He elaborates and expands its basic argument in several *Reflexionen* from the late 1780s and early 1790s, which Guyer finds particularly useful (1987, 279ff), but which are also pertinent to the present argument insofar as they address the problems of inner sense and the importance of outer, spatial sense. In fact, it is these *Reflexionen* that reveal the complete importance of space within the Critical philosophy, and it is the omission of their arguments that in part accounts for the neglect of the role of space in interpretations of Kant's Critical philosophy. Thus, a detailed examination of the

⁴⁰ To distinguish between the specific text of the Refutation of Idealism in the B-Edition of the *Critique of Pure Reason* and the more general argument of Kant's refutation of idealism, both in the *Critique* and as he expands it across the *Reflexionen* and other texts, references to the chapter of the *Critique* will be capitalized and the more general argument uncapitalized.

Refutation and these *Reflexionen* complements and competes the work of Chapter 4 above and reveals the full extent of the centrality of space in Kant's system as well as his refutation of idealism and proof of the existence of the external world.

As in the Fourth Paralogism of the A-Edition (A377, see §5.1 above), the Refutation distinguishes between two types of idealism, 'problematic idealism' and 'dogmatic idealism,' which declare respectively that "the existence of objects in space outside us to be either merely doubtful and **indemonstrable**, or else false and **impossible**" (B274). Kant identifies dogmatic idealism as Berkeleyian idealism, which regards things in space as merely imaginary as they are impossible in themselves. Kant asserts that he "undercut" the ground for this sort of idealism in the Transcendental Aesthetic, by arguing that space is not a condition of things in themselves, but rather only of appearances.⁴¹ This is an argument that goes back to the original separation of sensibility and understanding, and the treatment of the former, in the *Inaugural Dissertation*. This argument does not, however, resolve problematic idealism, which Kant associates with Descartes's doubt of the external world insofar as it "professes only our incapacity for proving an existence outside us from our own means of immediate experience" (B275). In addressing this second, 'problematic idealism,' Kant's Refutation specifies that, "The proof that is demanded must therefore establish that we have **experience** and not merely **imagination** of outer things [*äußeren Dingen*], which cannot be accomplished unless one can prove that even our **inner experience**, undoubted by Descartes, is possible only under the presupposition of outer experience [*äußerer Erfahrung*]" (B275). The argument that Kant presents in the Refutation is thus a *reductio* that turns Cartesian doubt—as Kant puts it: "the game that idealism plays" (B276)—against itself. He argues that the undoubted inner experience of the Cartesian *cogito*, which is accepted by the problematic idealist, is only possible if there is in fact outer experience, and thus the existence of inner experience presupposes and proves the existence of outer experience.

Kant structures the Refutation by presenting a theorem and then a proof. The theorem reads: "**The mere, but empirically determined, consciousness of my own existence proves the existence of objects in space outside me** [*Gegenstände im Raum ausser*

⁴¹ Kant already presented this refutation of 'dogmatic idealism' was in the A-Edition Fourth Paralogism (A378) and the Appendix of the *Prolegomena* (4: 374) (see §5.1 above).

mir]” (B275). In starting with consciousness of inner experience the Refutation is already working with the issue of self-perception, but the sort of self-perception in question is importantly qualified as ‘empirically determined.’ That is, this is not the empty thinking of apperception, nor intellectual intuition of some object called the self, and not even empirical *knowledge* of the self as a determined being, instead it is only the empirical *consciousness* of existence in time in relation to representations.⁴² The Proof of the Refutation rests precisely on the temporal nature of this empirical consciousness of the self and thus follows the argumentation of the ‘alternative strategy’ introduced in the final sections of the B-Deduction. It also builds, once again, upon the insight presented in Lambert’s objection to the *Inaugural Dissertation* and its argument for the ideality of time; for Lambert’s objection also starts from the recognition that “changes [and thus time] exist and occur in ... representations” and that “even an idealist must grant it” (10: 107, see §4.8 above). Similarly, Kant commences with the assertion: “I am conscious of my existence as determined in time” (B275). This is the statement that even the problematic idealist accepts, indeed it is one of the starting points of such idealism, that inner experience is known and the external world can be cast in doubt in relation to the certainty of that inner knowledge. It also relates to the objections to the *Inaugural Dissertation* raised by Lambert and Mendelssohn concerning the temporality of self-perception and is in line with Kant’s response that the perception of the self is only ever as an appearance, that is, in accordance with the ‘limiting condition’ (although the nature of time as either ideal or real, or the transcendental negotiation of the two, is not mentioned here). The second step in the argument is the assertion that “All time-determination presupposes something **persistent** [*Beharrliches*] in perception” (B275). This assertion recalls the First Analogy, which dealt with the temporal mode of persistence in terms of the category of inherence and subsistence. The similarity is, however, constrained only to the argument that in order to make *any* determination of time (not specifically a determination in inner experience), in terms of either succession or co-existence, there must be something that endures and against, or within, which the relations of time can actually relate. In the case of the Refutation, this insight into the necessity of persistence is extended to include the determinations of inner experience, which was

⁴² On this distinction see Guyer (1987, 292-5) and the *Reflexionen* he discusses to support this distinction (R5653, 18: 306 & R6313, 18: 613-17).

not the aim of the Analogy. Kant then argues, through an alteration to the second sentence of the Proof set out in a footnote in the B-Preface, that,

This persistent thing, however, cannot be an intuition in me. For all grounds of determination of my existence that can be encountered in me are representations, and as such require something persistent that is distinct even from them, in relation to which their change, thus my existence in the time in which they change, can be determined (Bxxxix, footnote).

Here Kant claims that the persistent thing necessary for time-determination cannot be an object of inner sense as any perception of the self is only a representation and must be determined by something else. Nor can it be the subject of apperception, as that it not an intuition but merely the thinking that must accompany all intuitions and not a persisting thing; with this differentiation Kant excludes the Cartesian thinking subject (*res cogitans*) as a persisting entity that can be used to determine time.⁴³ Thus, the persisting entity necessary for determination, must be outwardly intuited and thus be something outside. As Kant argues in the next step of the argument:

Thus the perception of this persistent [*Beharrlichen*] thing is possible only through a **thing** outside me [*ein Ding ausser mir*] and not through the mere **representation** of a thing outside me. Consequently, the determination of my existence in time is possible only by means of the existence of actual things [*die Existenz wirklicher Dinge*] that I perceive outside myself (B275-6).

This is the central claim of the Refutation and the argument for the existence of things outside and beyond the subject that represents them. Representations alone cannot provide the determination of persistence that is necessary to all time-determination, thus the perception of something persistent must be due to the existence of that persisting thing. The scope of this argument goes beyond just the representations of things as part of the process of cognition and is intended to encompass representations of things that could be imagined as outside us or created through fantasy as well.

Kant's argument against the mere fantasy of the external and persistent world is that the determination of persistence that would appear in this fantasy is itself only possible through the existence of something persistent outside of us, and thus that all

⁴³ Kant makes this point in the second Note attached to the Theorem of the Refutation (B278).

imagination, fantasy or deception that purports to present persistence is itself only possible in the context of the experience of actual persisting things outside us. As Kant explicitly formulates it in the Refutation: “in order for us even to imagine something as external . . . we must already have an outer sense, and by this means immediately distinguish the mere receptivity of an outer intuition from the spontaneity that characterizes every imagining” (B276-7n).⁴⁴ As this suggests, however, the Refutation does not mean that all inner experience, be it representation or imagination or dreams and delusions, is connected to an actually existing thing outside us, only that they would not themselves be possible without the actuality of outer objects that are perceived outwardly. As Kant notes, the argument functions in a more general way: “Here is had to be proved only that inner experience in general is possible only through outer experience in general [*äussere Erfahrung überhaupt*]” (B278-9). As it has been presented here, and indeed as Kant presents the argument in the section titled the Refutation of Idealism, the connection to space is not explicitly stated, but only suggested via the previous argument of the Aesthetic that space is the form of outer sense, which is then related to the argument for the necessity of the existence, and perception, of things outside us.

Kant makes the connection between the necessity of the existence of something persisting outside us and spatiality in the General Note on the System of Principles, which was also added to the B-Edition after the Refutation of Idealism. The General Note summarizes and concludes the arguments of the System of Principles, and in the context of addressing the categories of relation and the Analogies of Experience, Kant observes that, “It is even more remarkable, however, that in order to understand the possibility of things in accordance with the categories, and thus to establish **objective reality** of the latter, we do not merely need intuitions, but always **outer intuitions** [*äussere Anschauungen*]” (B291). This not only restates the assertion of the Refutation—that outer intuitions are necessary for all inner experience—but also connects this conclusion to the application of the categories and objective experience, making explicit how it connects to the aim of the Deduction. In providing an example of this necessity of outer intuition, Kant addresses the concept of substance and argues that, “in order to give something that **persists** in intuition . . . we need an intuition **in**

⁴⁴ Kant makes a similar argument in the footnote in the B-Preface (Bxl, footnote).

space (of matter), since *space alone persistently determines* [*weil der Raum allein beharrlich bestimmt ist*], while time, however, and thus everything that is in inner sense, constantly flows” (B291, italics added). This is Kant’s most direct assertion of the necessity of space as that which can, through its persistence, determine time in contrast to the inconstant flux of inner sense. Kant reiterates the importance of space soon after through the familiar image of the line, which was present in both the Aesthetic and the Deductions. He does this in order to illustrate how the perception of space is a necessary condition of the perception of alteration, as it is only through the analogy of the line and the motion in space that draws it, that the alteration of time can be comprehended:

this intuition is the motion of a point in space, existence of which in different places (as a sequence of opposed determinations) first makes alteration intuitable to us; for in order subsequently to make even inner alterations we must be able to grasp time, as the form of inner sense, figuratively through a line, and grasp the inner alteration through drawing of this line (motion), and thus grasp the successive existence of oneself in states through outer intuition (B292).

With this recurrence of the analogy of the line, which was used in both the Aesthetic and the Deductions, Kant asserts the importance of space and outer intuition for all experience and indeed, for all objective cognition. This importance, however, is not a straightforward promotion of space to the single ‘*a priori* formal condition of all appearances in general’ or the ‘one totality in which all of our representations are contained’ (to evoke the language that Kant has earlier used to assert the priority of time). Nor is it an out and out demotion of time and inner sense or their importance insofar as appearances are modifications of the mind, although it is a mitigation of the ‘amplification’ of time present in the A-Deduction due to the recognition of the problems and dangers of idealism inherent in that argument. Instead, the Refutation of Idealism relies upon the importance of the possibility of time-determination in inner sense, but now Kant also argues that outer sense of external persisting and spatial objects is also a necessary condition for any such determination as it is space alone that ‘persistently determines’ and makes the determination of the inconstant flux of time into objective succession possible. Thus time and space, and inner and outer sense, are co-implicated and interdependent, as both are necessary for the temporal determination that is essential for unified objective cognition.

§5.4.1. The Co-Implication of Time and Space, the Principle of Sufficient Reason and the Problems of Time and Space for Meillassoux

As it completes the account of transcendental time-determination, the Refutation of Idealism fulfills the ‘alternative strategy’ of the Deduction identified by Guyer in terms of the possibility of the temporal determination of empirical experience (including experience of the self as appearance in empirical inner sense). The co-implication of time and space that it entails is thus an essential and central element of Kant’s philosophy. This includes the reformulation of the principle of sufficient reason in terms of time-determination (see §3.2 above). The argument that Kant presents in Second Analogy resolves Hume’s problem by redefining the principle of sufficient reason as the ability to determine temporal succession through the application of the category of cause and effect, which supplies experience with the necessity that cannot be found in sensation alone. The Second Analogy alone, nor even the Analogies as a whole, did not, however, provide the complete account of the *possibility* of time-determination even if they set out the three modes of temporal determination: persistence, succession and simultaneity. It is only with the argument of the Refutation of Idealism and its insistence of the necessity, and thus co-implication, of outer sensation of things in space as that which can persistently determine, that the possibility of such determinations is proved.

The connection and co-implication of time and space in the Refutation now clarifies what was often uneasy or problematic in many of Kant’s earlier discussions of time and his discussions of the relation between time and space. Most obviously, the promotion of space in the Refutation disrupts all the previous assertions of the priority of time, although time and space as the forms of inner and outer sense have different roles in sensation and cognition, neither of them can be said to be fundamentally more important than the other, indeed now one cannot really be fully considered without the other. Thus what was earlier described as a ‘disruption’ of space for the supposed priority of time is now just a recognition of the necessity of this co-implication. The disjunction between space as disruptive and space as necessary is highlighted between the differences between the two Editions of the *Critique* for the A-Edition ‘amplifies’ time and emphasizes its priority, thus also emphasizing the disruptive or awkward role

of space, whereas the B-Edition retreats from this emphasis on time and (eventually) affirms the co-implication of time and space and thus what was disruptive in the A-Edition is affirmed in the B-Edition, even if not always particularly clearly. Several examples of this ‘disruptive’ co-implication have already been encountered in the present Chapter. Most obvious is Kant’s affirmation of the need for the *analogy* of space and the straight line in order to ‘remedy’ time’s ‘lack’ of shape or position (A33/B50). This ‘analogy’ also resulted in the numerous instances of Kant’s use of the image of the line throughout both versions of the Deduction, but whereas in the A-Edition such uses were an assertion of the ‘amplification’ of time and the ability of the imagination and inner sense alone to determine time in a line, in the B-Edition they become instances of the co-implication of the two and hints of the forthcoming ‘alternative strategy’ of the Deduction and its completion in the Refutation.

This account of time-determination as relying upon the co-implication of time and space now augments the argument presented in §3.2 that asserted that Kant’s reformulation of the principle of sufficient reason takes place in terms of time, for insofar as it is temporal that reformulation must also be spatial as the two are always co-implicated. This development now forces apart what was presented in Chapter 3 as a point of similarity between Kant and Meillassoux, namely, their reconfiguration of the principle of sufficient reason in terms of time. For now it has been argued that Kant’s temporal reconfiguration of the principle of sufficient reason ultimately entails a role for space in that reconfiguration. Space, however, and the use of the spatial metaphor of the straight line, was identified in §3.4 as a particularly problematic point for Meillassoux’s temporal reconfiguration of the principle of sufficient reason. This was because the use of the metaphor of the straight line accentuated the disjunction between the two heterogeneous forms of time that Meillassoux uses in his criticism of Kant and reformulation of the principle of sufficient reason. The ‘principle of factuality,’ with which Meillassoux replaces the principle of sufficient reason, and the absolute of ‘hyper-chaos’ that it reveals is a temporality of the eternal instant, where there is no necessary connection between one time and the next because there is no real necessity at all (see §3.3.2 above). However, along with this time of ‘hyper-chaos,’ Meillassoux also relies upon the determined succession of chronology, and part of his criticism of Kant is that Kant eliminates any real chronology and replaces it with logic (see §3.3.1 above). To illustrate chronology Meillassoux explicitly uses the

metaphor of a straight line. The criticism of Meillassoux presented in §3.4 above, revolved precisely around the issue of time-determination and how within the reality of ‘hyper-chaos’ there could be no determination or experience of the determined time of succession that makes up chronology. Indeed, what has been presented here as Kant’s solution to the problem of time-determination—the co-implication of time and space outlined in the Refutation—was, via the work of Martin Hägglund, already presented in §3.4 as a criticism of Meillassoux’s account of ‘hyper-chaos’ and his engagement with the empirical sciences.⁴⁵

The arguments of the Refutation of Idealism and the account of time-determination in terms of the co-implication of time and space are thus pertinent to the problems that Meillassoux encounters in his temporal reconfiguration of the principle of sufficient reason. Because of this, Meillassoux avowed reluctance to engage with the Refutation and his attempt to sidestep having to confront it through his analysis of ‘correlationism’ instead of idealism is telling (2007, 408; see §2.1.1 above). As the problems of time-determination and the relation of time and space that Kant confronts and resolves in the Refutation are precisely problems that Meillassoux leaves unresolved in his own philosophical system regardless of the debate between realism and idealism (or ‘correlationism’). However, even if he does not explicitly deal with the role of space, or at least the spatial metaphor, in the issue of time-determination, Meillassoux nonetheless *does* articulate the debate between realism and idealism in terms of space, in that he describes the real world in terms of the “great outdoors” and as a “foreign territory” (2008a, 7) and this is another disruptive role of space in his thought, which contrasts with his lack of recognition of space and the spatial metaphor in the issue of time-determination. This form of the spatial metaphor as external and real is nonetheless also important for the argument of the Refutation of Idealism, for an

⁴⁵ Whereas Hägglund argued for the co-implication of time and space via the work of Jacques Derrida and his notion of the ‘trace,’ the argument presented here develops this co-implication through an analysis of Kant alone. It must, however, be remembered that Hägglund presents Derrida’s argument as “a new transcendental aesthetic (which accounts for the synthesis of temporality without positing a formal unity of apperception that subordinates the division of time)” (2008, 10; see §3.4 footnote 51 above). In the present Chapter, it is argued that what Hägglund describes as Derrida’s ‘new’ Transcendental Aesthetic is in fact already there in the B-Edition of the *Critique* and the ‘alternative strategy’ based upon the issue of the possibility of the time-determination of empirical experience, i.e., without apperception, and which is completed in the Refutation of Idealism and its co-implication of time and space.

integral part of the Refutation involves the argument that the sense of space is an outer sense of the external world, however, what the Refutation of Idealism and the Critical philosophy in general means by the ‘external world’ or ‘outside us’ is not so straightforward.

In the A-Edition Fourth Paralogism Kant discerned an equivocation in the term ‘outside us’ and distinguished between an ‘empirical sense,’ of objects in space, and a ‘transcendental sense,’ of the existence of ontologically discrete things other than the self (see §5.1 above). At that point, in what Guyer terms an “ontological reduction” (1987, 281), Kant explicitly dismissed the ‘transcendental sense’ of ‘outside us’ and affirmed only the ‘empirical sense.’ This ‘reduction’ is exactly what Meillassoux criticizes as the ‘radical exteriority’ of ‘correlationism,’ which is only ever ‘outside’ in relation to the subjective ‘us.’ In the B-Edition, however, Kant does not, in either the Refutation or the truncated version of the Fourth Paralogism, make this distinction along the lines of the equivocation in ‘outside us.’ Consequently, the use of ‘outside’ and ‘outer’ in the Refutation maintains the equivocation. The General Note makes clear that Kant uses ‘outside’ at least in the ‘empirical sense’ to mean objects in space, but this leaves open the possibility that he also uses ‘outside’ in the ‘transcendental sense’ to mean the existence of ontologically distinct entities. In *Kant and the Claims of Knowledge*, Guyer argues that with the Refutation of Idealism Kant does indeed mean ‘outside’ in the ‘transcendental sense.’ He writes: “what Kant argues in 1787 is that for the purposes of even subjective time-determination we must employ the intuition of space to represent objects which we conceive as existing independently of ourselves” (282).⁴⁶ In line with his argument that the ‘real premise’ of the Deduction in terms of time-determination is resolved by the determination provided by the persistence of intuitions of space argued for in the Refutation, Guyer argues that the rewriting of the *Critique* in 1787 also renounces the ‘ontological reduction’ of the transcendental sense of ‘outside us’ and argues for a sort of realism that accords with Meillassoux’s ‘great outdoors’: but a realism that is not temporal in the sense of Meillassoux’s ‘hyper-chaos,’ but is spatial in the sense of the ‘outside.’

⁴⁶ He does, nonetheless, concede that, “the intuition of space ... does not represent those independent objects *as they are in themselves*” (282).

Guyer's position is a contentious one—he characterizes it as part of a “scorned minority” (281). It is criticized by Henry Allison in *Kant's Transcendental Idealism*, who argues that while that argument of the Refutation does assert the existence of things in space that must be assumed to have an existence in themselves, they are not in themselves spatial and their existence ‘outside us’ is only to be taken in the ‘empirical sense’ in line with a more orthodox transcendental idealism (2004, 298-303). The argument put forward in this thesis does not conform to or confirm either side of this debate. Instead, it has the more minimal goal of following the outlines of the debate and its arguments about space as it disrupts and develops within the two Editions of the *Critique*, in order to demonstrate how space is a necessary and central part of Kant's philosophy in terms of its co-implication with time. Thus space, through the necessity of its co-implication with time, and even insofar as it disrupts the ‘amplification’ of time in the A-Edition, becomes a productive element within Kant's system, which accounts for the importance of spatial metaphors examined above in Chapter 4 and also Kant's treatment of the natural sciences in terms of space in the *Metaphysical Foundations of Natural Science*. As such, and in terms of his refutation of idealism, space is at least the issue through which Kant engages with the question of the real existence of the external world, and it is through examining his various discussions of space that the contours of that engagement are discerned. Furthermore, this productive problematic necessity of space and Kant's engagement with it prefigures many of the problems that Meillassoux both finds and challenges in Kant and also perpetuates in his own philosophy in terms of the uneasy relation between time and space and the problem of the determination of chronological ‘ancestrality.’ Recognizing the perpetuation of the problematic necessity of space, and its relation to time, in philosophy influenced by Kant also contributes to the wider discourse of philosophies of space.

§5.5. From the Determination of Time to an Engagement with the Real: Space in the Reflexionen after 1787

The Refutation of Idealism in the *Critique of Pure Reason* and the emphasis that it places on the persistent objects in space as necessary for the time-determination of inner experience, is, even including the General Note, deceptively brief and inadequate

for the grand arguments that Guyer aims to draw from it. Guyer argues that Kant's dissatisfaction with the argument of the Refutation produced the changes and explication added in the footnote to the B-Preface and beyond that in several *Reflexionen* written in the years following the publication of the B-Edition (1987, 287-8). The issue and problem of idealism and the complex interrelation of time and space, thus occupied Kant's thought beyond the confines of the two published versions of the *Critique*. This section thus examines how Kant continued the line of argumentation put forward in the Refutation of Idealism, and how this continuation further developed the importance of space within his system beyond its co-implication with time and the issue of time-determination and into an engagement with the issue of the reality of the external world.

Many of the *Reflexionen* in question repeat the same basic argument of the published Refutation, namely that the inner experience, which is conceded by the problematic or skeptical idealist, is determined in time, and such determination requires something persisting, which cannot be given in the inconstancy of inner sense, and thus is only made possible by outer sense and the persistence of space. Thus in R5653 from the mid to late 1780, which is titled "Against material idealism," Kant starts from "the empirical consciousness of myself, which constitutes inner sense" and thus consciousness of time and then elaborates upon this possibility of the perception of the self in time to argue that: "in space alone [*im Raume allein*] do we posit that which persists [*Beharrliche*], in time there is unceasing change. But now the determination of the existence of a thing in time, i.e., in such change, is impossible without also connecting its intuition to that which persists. This must therefore be ~~given~~ intuited outside us as an object of outer sense [*Gegenstand des äußeren Sinnes*]" (18: 307). Similarly, R5654 from 1788-89, titled "Against Idealism," argues that, "The existence of a thing in time cannot be determined through the relation of its representation in the imagination to other representations of it, but rather through the relation of a representation of sense to that in its object which is persistent" (18: 313). R5709 also from the late 1780s and titled "On the existence of outer things [*Von der Existenz äußerer Dinge*]," argues that, "we can only experience our own existence insofar as we determine it in time, for which that which persists is required, which representation has no object within us" (18: 332). The summary of the entire argument in R6311—from 1790 and titled "Refutation of problematic idealism"—concludes, "This thing that

persists [*Beharrliche*] cannot be our self, for as an object of inner sense we are likewise determined through time; that which persists can therefore be placed only in that which is given through outer sense” (18: 611).⁴⁷ From the same batch of notes, R6312 states, “That even the empirical determination of one’s own existence in time is not possible without the consciousness of one’s relation to things outside us [*Dingen ausser uns*] constitutes the ground why this is the only possible refutation of idealism” (18: 612). Several more of these notes from the same time deal with the problem of idealism in more detail without explicitly restating the general argument: R6313 titled “Against Idealism” (18: 613); R6314 titled “On idealism” (18: 616); R6315 titled “On Idealism” (18:618); and, R6316 titled “Against Idealism” (18: 621). But Kant’s consideration of the issues of inner sense, time-determination and idealism did not end there. He pursues the argument in R6317 from 1790-91; and right up until R6323 from mid 1793, which has a section headed simply “Idealism” (18: 643), and is described by Guyer as “Kant’s last effort at the refutation” (1987, 291). In addition to restating the centrality and importance of the argument of the Refutation, all of these notes are especially valuable for clarifying the details of Kant’s argument, especially concerning space itself and how connects back to the arguments about space in the Aesthetic.

One of the earliest of these notes, R5653 (mid to late 1780s), expands upon the precise nature of space that is at work in the argument against idealism. In this note Kant asserts that, “Persistence [*Beharrlichkeit*] intrinsically pertains to the representation of space [*Raumesvorstellung*], as Newton said,”⁴⁸ but he goes on to qualify, “The persistence of the form in our mind is not the same thing (for the form of time is equally persistent), rather [it is] the representation of something ~~persistent~~ outside us [*ausser uns*], with which we underlie all determination of time” (18: 308). This

⁴⁷ This *Reflexion* is actually written by Kant’s former student and disciple Johann Gottfried Carl Christian Kiesewetter, who visited Kant in Königsberg in the autumn of 1790 and met with Kant daily for the discussions that produced this whole series of notes (the rest in Kant’s hand) dealing with the problem of idealism (see Guyer’s footnote in *Notes and Fragments* page 592-3n.81).

⁴⁸ The evocation of Newton in this note recalls the arguments concerning Newtonian absolute space in the *Directions in Space* essay and how that discussion of space relates to that of the later *Orientation in Thinking* essay as well as the *Metaphysical Foundations of Natural Science*, published in 1786 around the time that this note was composed. The connection between the space of the refutation of idealism and these more explicit considerations of space is addressed in §§5.7-5.8 below.

qualification specifies that Kant is concerned with the persistence of things in space and not the persistence of the form of space itself, which would add nothing more than the persistence of the form of time. This distinction marks one of Kant's strategies that again goes back to his response to Lambert and Mendelssohn; namely, the need to keep in mind the parallel between time and space, both as ideal forms of intuition, and thus in this case equal in terms of the persistence of the form, and also emphasize and use what is different between them, i.e., their inner and outer forms and the inconstancy and persistence of their respective objects.⁴⁹ Kant expands on the nature of space (and objects in space) and its relation to time in terms of persistence later in the same note through the familiar straight line: "The representation of space is the ground of the determination of time on account of persistence (likewise only in it can one acquire a representation of time as a magnitude [*Größe*] through a line that I draw, while I am conscious of my synthesis merely in the subject)" (18: 308-9). Kant reasserts the basic insight of the Refutation, that the determination of time requires a persistence only provided via the representation of space and outer sense, however, he also clarifies this determination in terms of magnitude and also through the productive synthesis of the action of drawing a straight line. These two clarifications and their connection bring together and begin to elaborate how they were used in the *Critique*. The image of the line and the productive action of drawing a line in thought were used in the Deduction to illustrate and describe the synthesis of the imagination, which was ultimately the means through which time-determination takes place (B156, B292). Similarly, the category of magnitude was invoked in §25 of the B-Deduction as the means through which the spatial apprehension of the house was synthesized into the unity of the manifold. Furthermore, magnitude, along with form and relation, was also one of the fundamental determinations of outer sense as Kant initially defined it in the *Aesthetic* (A22-3/B37, see §5.1 above).

⁴⁹ This distinction marks a point of difference between Kant and Meillassoux, as the latter argues that it is because of the eternal persistence of time across all changes in time as hyper-chaos that time is the ultimate foundation of reality. In his interpretation of Kant's Refutation of Idealism, Robert Hanna asserts that, "it is incoherent to suggest that time itself could be a permanent or enduring thing *in* time" (156)—an assertion that simply dismisses Meillassoux's argument for the eternity of hyper-chaos. Although Kant's argument has different aims and assumptions to that of Meillassoux's—their focus on permanence and eternity respectively highlights one of those differences—and thus the two are not always directly comparable, this distinction nonetheless highlights an important difference between the overall arguments of both thinkers.

The possibility of the representation of time as a magnitude through its representation in space is also evoked in R6314, and here Kant connects it back to the analogy of the line from the Aesthetic, and also to the definition of space in terms of simultaneity—a definition that is also important in for the role of space in the argument against idealism. In this note Kant argues that,

We cannot represent any number except through successive [*successive*] enumeration in time and then grasping this multiplicity together in the unity of a number. This latter, however, cannot happen except by placing them beside one another in space [*Raum*]: for they must be conceived as given **simultaneously** [*zugleich*], i.e., as taken together in one representation, otherwise this multitude does not constitute a magnitude [*Größe*] (number);⁵⁰

What Kant describes as the process of representing number is another case of drawing a line and grasping it all together. In this particular version of the argument, it is the grasping together in a unity that is more important than the drawing, and this can only be done if the points can be considered as simultaneous, which represents them as a magnitude rather than a multiplicity. As he argues in the Aesthetic, simultaneity is the defining feature of space, and this is precisely what he argues once again as the passage continues:

but it is not possible to cognize simultaneity [*Zugleichseyn*] except insofar as, beyond my action of grasping it together, I can **apprehend** (not merely think) the multiplicity as given both forwards and backwards. There must thus be given in perception an intuition in which the manifold is represented outside and beside each other [*ausser einander und neben einander*], i.e., the intuition which makes possible the representation of space [*Raumesvorstellung*] (18: 616).

There are two important points that connects simultaneity to spatiality here. First, that things that are simultaneous can be apprehended both forwards and backwards, which recalls the Third Analogy (especially A211/B258); and, secondly, that they are outside

⁵⁰ Kant makes a similar statement in the B-Introduction where he argues that arithmetic is synthetic and connects it to an intuition of space, albeit perhaps unintentionally as it is not the spatiality but rather the synthetic-ness that is main point of the argument. He claims that the concept of number, in this case the number five, must be given through intuition of “one’s five fingers, say, or ... five points” (B15). This intuitive status of number as the distinctness and yet simultaneous unity of the ‘five points’ is the same as that of the objects place in space in R6314 discussed here.

and beside each other, which is explicitly spatial in its externality (as objects in space are always outside each other). Both of these connections are important, but the evocation of the Third Analogy returns to the treatment of time-determination in terms of a reconfiguration of the principle of sufficient reason in Chapter 3 above, and the promised examination of the role of space in the Third Analogy that was promised there (in footnote 31).

The connection between the spatiality involved in the refutation of idealism and the Third Analogy is reinforced in R6311, the general overview of the argument of the refutation of idealism, which concludes: “Thus outer sense possesses reality [*Realität*], for without it inner sense would not be possible. – From this it seems to follow that we always cognize our existence in time only in *commercio*” (18: 612). This *commercio* is the dynamical community of the thoroughgoing interaction of all simultaneous substances that Kant argued for in the Third Analogy under the name *commercium* (A213/B260).⁵¹ In Chapter 3 above, this was examined in terms of the temporal mode of simultaneity and necessity of the co-existence of substances for their causal interrelation (a fundamentally Newtonian and anti-Leibnizian understanding of the world in terms of universal interaction). In the B-Edition version of the Third Analogy, however, Kant also connects this simultaneous community to space; as the heading from the start of the B-Edition version of the Analogy asserts: “All substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction” (B256).⁵²

As argued in Chapter 3, it is the application of the relational category of community that guarantees this temporal mode of simultaneity, but the B-Edition’s spatial version of the Analogy extends its arguments beyond time-determination and extends to the

⁵¹ And also even earlier in the *New Elucidation* in terms of the ‘principle of co-existence’ (see §2.3.1.1 and §3.2 above).

⁵² Guyer describes the Third Analogy as “the culmination of Kant's lifelong effort to provide foundations for Newtonian science, while rejecting both Newton's metaphysics of absolute space independent of the subject of experience and Leibniz's metaphysics of utterly independent rather than completely interacting substances” (1987, 267). Considering the developments of both the *Metaphysical Foundations of Natural Science* and the incomplete sketch of the *Opus Postumum*, both of which develop Kant’s Newtonian worldview, the Third Analogy is perhaps not quite the ‘culmination’ of this work, but certainly an important element. Guyer’s observation, however, identifies Kant’s complex relation to Newton with regard to the issue of space and the concept of absolute space in particular. This relation is addressed in §5.7 below.

determination of place. As Kant states in the introductory passages added to the B-Edition version: “the simultaneity of substances in space cannot be cognized in experience otherwise than under the presupposition of an interaction among them; this is therefore also the condition of possibility of the things themselves [*Dinge selbst*] as objects of experience” (B258). Kant’s argument for this conclusion is that just as empty or absolute time cannot be perceived and thus used to determine succession (the argument of the Second Analogy) or simultaneity, neither can absolute space be “an object for our possible experience” (A214/B261) and thus either the simultaneity of two objects, or the specific place of a single object, can only be determined through the category of community and the dynamic community (*commercium*) or reciprocal influence of all substances.⁵³ In agreement with the argument for the unity of all three Analogies put forward in Chapter 3 in terms of Kant’s theory of causality and thus his response to Hume’s problem, Guyer also concludes that the Analogies are all interlinked. He expresses this conclusion, however, in terms that are more pertinent to the current concern of the relation between space and time expressed by the refutation of idealism: “The determination of change presupposes that of endurance, which in turn requires knowledge of spatial positions; but knowledge of spatial position, in turn, requires knowledge of interactions, which are themselves temporal relations among spatially distinct objects” (1987, 275). All of which leads from experience to a unified, determined and interrelated concept and system of nature at least as a regulative idea, but it does not guarantee the legitimacy of that experience as objective, for the problem of the possibility of idealism, or purely subjective experience, still remains. Thus while this reconsideration of the Third Analogy elucidates some of the details about the relation between space and time, especially in terms of simultaneity and community, it

⁵³ Parsons argues that in the B-Edition the categories require a “second schematization of the category in terms of space” (226). Friedman builds upon this to argue that the inclusion of simultaneity amongst the modes of time in the Analogies shows that the schematization actually takes place in terms of unified and four dimensional space-time, and that Kant comes very close to explicitly articulating the notion of Newtonian space-time (1992, 161). These arguments show that the interrelation between space and time in Kant, and especially in the Third Analogy is somewhat obscure or confused. Presenting the confusion of the Third Analogy here, in the context of the emphasis on space in the refutation of idealism, is part of the present strategy of arguing that what was problematic in the argument of the Deduction, Schematism and Analogies, namely the theory of time-determination and the role of inner sense, is confronted in the argument of the refutation of idealism in terms of the importance of the interrelation of time and space.

does not itself guarantee or argue for the reality of objective experience in the same way as Kant's refutation of idealism does.

The importance of temporal mode of simultaneity—as examined in the Third Analogy—for the refutation of idealism, and its connection to the simultaneity of space, in terms of the possibility contained within it for perceiving things either forwards or backwards, is explicitly addressed in R6312. As with the Analogies, here Kant argues for the unity of the three temporal modes of simultaneity, succession and persistence:

On what basis do we cognize the simultaneity [*Zugleich seyn*] of things, since in apprehension our representations succeed one another [*einander folgen*]? From the fact that in this case we can apprehend the manifold both forwards and backwards. Now since in inner sense everything is successive [*Successiv*], hence nothing can be taken backwards, the ground of the possibility of the latter must lie in the relation of representations to something outside us, and indeed to something that is not itself in turn mere inner representation, i.e., form of appearance, hence which is something in itself [*sache an sich*]. ... Further, the representation of that which persists [*Beharrlichen*] must pertain to that which contains the ground of time-determination, but not with regard to succession [*Succession*], for in that there is no persistence; consequently that which is persistent must lie only in that which is simultaneous [*Zugleich*], or in the intelligible, which contains the ground of appearances (18: 612).

This note repeats many of the arguments of already outlined: that simultaneity requires the reversibility of the order of perception (although it does not mention magnitude), that inner sense is only ever successive (cf., the Aesthetic A31/B47, and the 'phenomenological step' of the Analogies) and that persistence required to ground the determination of the time of inner sense must lie outside and is connected to simultaneity. Furthermore, this section also contains an enigmatic assertion that the persistent thing outside us, which makes time-determination possible, is not a "mere inner representation" but rather "something in itself [*sache an sich*]." It is assertions such as this, that go beyond the more minimal 'ontological reduction' about the 'outside' of the Fourth Paralogism of the A-Edition, that Guyer uses to support his interpretation of Kant as arguing for the ontological reality of things in space as distinct and real (1987, 291). Kant provides further arguments for the connection between space and simultaneity, and also the interrelation between successiveness and simultaneity in persistence, in the next *Reflexionen*, R6313:

Since the imagination and its product is itself only an object of inner sense, the empirical consciousness (*apprehensio*) of this state can contain only succession [*Succession*] of temporal conditions. But this itself cannot be determined represented except through that which persists [*Beharrliche*], with which that which is successive is simultaneous [*successive zugleich ist*]. This persisting thing, with which the successive is simultaneous, i.e., space [*der Raum*], cannot in turn be a representation of the mere imagination, but must be a representation of sense, for otherwise that enduring [*Bleibende*] thing would not be in sensibility at all (18: 614).

Immediately after this Kant restates that, “The simultaneity [*Zugleichseyn*] of the representation of *A* and *B* cannot even be represented without something that persists [*Beharrliches*]” (18: 614) and then rearticulates the necessity of reversibility of the succession of *A* and *B* in order to determine endurance. Again the aim of this passage is to reassert the argument against idealism, and the necessity of outer sense through which the persistence of space makes possible all time-determination of inner sense, including the determination of the imagination.

All of these reiterations and explications of the argument against idealism emphasize how persistence and simultaneity are only provided through space and outer sense. Even with the B-Edition’s consideration of space in the Third Analogy, this emphasis on space is in tension with the arguments of the Analogies, which presented persistence, succession and simultaneity all as modes of time the unity of which made time-determination possible. This tension, however, is part of the more general problem of the prioritization or ‘amplification’ of time and inner sense in the *Critique*. Kant comes closest to articulating this tension in the sections added to the B-Aesthetic at B66ff, when he identifies the “question of how a subject can intuit itself” as a “difficulty ... common to every theory” (B68). Despite identifying the problem of inner sense as a ‘difficulty,’ earlier in the same paragraph he also identifies time as that which “grounds the way in which we place [representations] in mind as a formal condition, [which] already contains relations of succession [*Nacheinander*], of simultaneity [*Zugleichseins*], and of that which is simultaneous with succession (of that which persists) [*dem Nacheinandersein zugleich ist (des Beharrlichen)*]” (B67).⁵⁴ At the same time as he recognizes the problem of inner sense Kant also unwittingly sets out and argues for exactly what creates this problem as he expands or ‘amplifies’

⁵⁴ Despite his more general reservations about the B-Edition and its promotion of the understanding over the imagination, Heidegger references this section as evidence of Kant’s theory of “Time as pure self-affection” (1997, 133: [190-1]), which is interpreted in line with Heidegger’s own philosophical prioritization of time.

time to include simultaneity and persistence, precisely what he elsewhere (including earlier in the Aesthetic) argues are aspects of space and outer sense. With this ‘amplification’ Kant falls prey to what he, in the same paragraph, identifies as the illegitimate consequence of this ‘amplification,’ how inner intuition becomes intellectual (B68). The ‘amplification’ of time and inner sense in the A-Edition was part of the problem that prompted the rewriting of the reworking of the *Critique of Pure Reason* and the limitation of the role of inner sense in the B-Deduction, even if there are still traces of the ‘amplification’ and remainders of the still-important yet problematic role of time in the Schematism and the Analogies. The argument of the Refutation of Idealism and its development in the *Reflexionen*, however, renegotiates the importance of inner sense and its relation to outer sense and space. This renegotiation has led numerous commentators to claim that the argument of the Refutation can be interpreted as a reversal of the relation of priority between time and space, so that space becomes the dominant and more foundational partner.⁵⁵ In *Kant and the Claims of Knowledge*, Guyer goes further than simply reversing the order of priority between time and space, which still can be taken to maintain their transcendental ideality and thus the existence of their object as representations and not things in themselves (the ‘ontological reduction’ of the A-Edition Fourth Paralogism), and argues that the Refutation of Idealism and its development through the *Reflexionen* constitute an argument for the ontological existence of things in space as distinct entities in themselves.

There are indeed several passages in the *Reflexionen* that support Guyer’s argument. Even as early as the late 1780s Kant argues in R5653 that, “Space [*Der Raum*] proves to be a representation that is not related to the subject as object ... but immediately to something distinct [*unterschiedenes*] from the subject, that is the consciousness of the object as a thing outside me [*Dinges ausser mir*]” (18: 309). The equivocation in ‘outside’ is still present, allowing this passage to be interpreted in line with the ‘empirical sense’ of the A-Edition Fourth Paralogism; but Kant also makes the stronger statement that this ‘thing’ outside is *distinct* from the subject in a way that the

⁵⁵ Green (193, 254, 257) and Beiser (2002, 126) assert the priority of outer sense in the refutation as a sort of over-statement of the position, which they acknowledge is much more subtle than such a simple reversal can describe. Both eventually argue for the interdependence of time and space.

object as correlated to the subject is not. The emphasis on this ‘distinction’ is more pronounced and developed in R5654, where Kant argues that,

here it should be noticed that every object signifies something *distinct* [*unterschiedenes*] from the representation, but which is only in the understanding, hence even inner sense, which makes oneself into the object of our representations, signifies something *distinct* [*verschiedenes*] from oneself (as transcendental object of apperception). Thus if we did not relate the representations to something *distinct* [*verschiedenes*] from ourselves, they would never yield knowledge of objects; for as far as inner sense is concerned, it consists only in the relation of representations, whether they signify something or nothing, to the subject (18: 312. italics added).

Kant explicitly states three times that the objects outside us and in space are “distinct” from representations and thus “distinct” from our selves. Kant makes a similar statement in R6312: “In order for something to seem to be outside us, there must really [*wirklich*] be something outside us, although not constituted in the way in which we represent it” (18: 613). Similarly in R6317 he even goes as far as to explicitly identify things in space as things in themselves. He argues that, “if it is shown that the determination of our own existence in time presupposes [*voraussetze*] the representation of a space [*eines Raums*] ... then outer objects [*äußeren Gegenständen*] can have their reality [*Realität*] (as things in themselves [*Sachen an sich*]) secured precisely by the fact that one does not treat their intuition as that of a thing in itself” (18: 627).⁵⁶ These two notes use language that Kant also used in the Fourth Paralogism—*wirklich* and *Realität* at A375—only in terms of empirical realism, but their use in these *Reflexionen* where they are contrasted with things that only ‘seem to be outside us’ and connected to ‘things in themselves,’ is more in line with the ‘transcendental sense’ of ‘outside’ that was specifically precluded by the Fourth Paralogism. This ‘transcendental sense’ of ‘outside’ and space becomes even more pronounced in R6323, the very last *Reflexionen* to deal with the issue of idealism. Kant again repeats many of the features of the refutation of idealism, such as the importance of simultaneity and the reversibility of apprehension, before concluding that space, “does not exist merely in my representation but rather as thing in itself [*Ding an sich*]”

⁵⁶ The ‘presupposition’ of space that this section refers to is an important element of Guyer’s argument about the metaphysics of the refutation (1987, 323-9). This ‘presupposition’ of space replaces need to either causally know or somehow infer the existence of space.

(18: 643). In each of these sections Kant explicitly distinguishes between the representation of object in space (the ‘empirical sense’ of outside) and their reality (the ‘transcendental sense’) and in doing so asserts their existence as things in themselves exterior and distinct to the subject.⁵⁷

These *Reflexionen*, with their emphasis on the distinct existence of objects in space as things in themselves and not merely representations, also contain an important yet obscure condition that permeates the arguments against idealism and their interpretation. Kant very specifically argues that the things in themselves in space are not only merely representations, and that our representations of them can never be treated as things in themselves. The last part of this argument, that representations cannot be treated as things in themselves, is the means by which Kant guarded against the ‘dogmatic idealism’ of Berkeley and one of the fundamental premises of transcendental idealism. Kant restates this central argument and its consequences in R6313:

If our cognition of outer objects [*äußeren objecte*] had to be a cognition of them and of space [*und des Raumes*] as things in themselves [*Dinge an sich selbst seyn*], then we would never be able to prove their reality [*Wirklichkeit*] from our sensory representation of them as outside us. For only representations are given to us, their cause can be (either) inside us or outside us, and sense can never decide anything about this. But if the representations of inner sense as well as those of outer sense are merely representations of things in appearance and if even the determination of our consciousness for inner sense is possible only through representations outside us in space [*außer uns im Raum*] [*breaks off*] (18: 614-15).

The argument breaks off mid-sentence, but its conclusion is obvious as another restatement of the refutation of idealism that it is the persistence of objects intuited outwardly and in space that makes time-determination possible. The first sentence reaffirms the argument against ‘dogmatic idealism’ via the distinction of appearances and things in themselves; but Kant unequivocally restates this distinction with regard to the objects of outer sense, which are “merely representations” and thus “appearances” “even if” the refutation of idealism holds. Allison uses this precise

⁵⁷ In addition to Allison’s more systematic objections to Guyer’s argument, Hoke Robinson also takes issue with what he calls Guyer’s “unorthodox thesis”. He notes that there are only two *Reflexionen* that directly support Guyer’s thesis that the refutation argues for things in themselves (R6312 & R6323), and asserts that there is more support for an argument of the opposing view (1989, 273)

passage to argue that Kant “never fully abandoned the argument of the [A-Edition Fourth Paralogism’s critique of ‘dogmatic idealism’]” (2004, 301).⁵⁸ Even in the *Reflexionen* that focus on the problem of ‘skeptical idealism’ and the B-Edition Refutation, Kant maintains, somewhat ambiguously, the central tenet of transcendental idealism and the separation of appearances and things in themselves. This is precisely the position that Guyer argues against. He recognizes that in these *Reflexionen*, and especially in R6212 (at 18: 613 quoted above) that Kant attempts a “reconciliation of the refutation of idealism and transcendental idealism” (1987, 325). But the conclusion of his book is that in pursuing the argument of the Refutation of Idealism in line with the transcendental theory of experience as one of time-determination, Kant “dropped the simplistic dichotomy underlying the fourth ‘Paralogism’ of 1781” and argued that through the empirical knowledge of both the self and the objects of outer intuition knowledge of the independent reality of objects in space could be known, but that this does not mean that how they appear is how they are. (1987, 415).

The debate between Guyer and Allison on this point is unresolved and perhaps unresolvable.⁵⁹ The aim of the present thesis is not to review or resolve this debate in its entirety, but rather to use it to show that space is a central element in Kant’s philosophy, even if as such it remains problematic, unresolved and disruptive. The argument is thus not to assert or endorse the priority of either time or space, or even to argue that this contentious issue is solved through their interdependence. Instead, it argues that this interdependence is a problematic one, and thus operates and manifests

⁵⁸ Allison also refers to R6317 and its argument that the reality of outer objects is “secured precisely by the fact that one does not treat their intuition as that of a thing in itself” as further support for the separation of appearances and things in themselves.

⁵⁹ The debate progresses from the first Edition of Allison’s *Kant’s Transcendental Idealism* (1983), to Guyer’s criticisms of Allison’s strong interpretation of transcendental idealism in *Kant and the Claims of Knowledge* (1987, especially the last three Chapters), which builds upon an earlier (1983) consideration of the Refutation of Idealism. Allison responded to Guyer first in a review (1989) of Guyer’s book and then in the revised and expanded edition of *Kant’s Transcendental Idealism* (2004), and provides an overview in the conclusion of the very recent *Kant’s Transcendental Deduction* (2015). Of parallel interest is Allison’s early paper ‘The Non-Spatiality of Things in Themselves for Kant’ (1976), although due to preceding Guyer’s work this does not address the arguments of Guyer or the refutation of idealism. This article aims to refute the ‘neglected alternative’ argument that Kant’s transcendental idealism, and the ideality of space in experience, does not rule out the possibility that things in themselves could exist spatially independent of any experience of them.

as a problematic sort of limit throughout Kant's philosophy (even taking into account the technical sense of 'limit' examined above in Chapter 4), which he continually engages with, pushes up against and attempted to deal with as part of the debate between idealism and realism. Furthermore, as part of the debate between idealism and realism, and with the inner subject and the 'external world' (in all its ambiguity) this problematic interrelation is responsible for the problems with Meillassoux's interpretation and criticism of Kant and also for the problems with Meillassoux's own system that he erects in the place of Kant.

Because the problematic role of space is connected, through the refutation of idealism, with the determination of inner sense and all the problems of self-perception in question, the subjective and inner side is a useful way to approach and elucidate the reciprocal spatial and outer side of the problem. The problematic status of space can thus be seen as a counterpoint to the 'aporia of inner sense' (outlined by Garth Green in his book of the same title) that is present in the arguments and problems of the two versions of the Deduction (see §5.2 above). The 'aporia' in question is the confrontation between the restrictive account of inner sense that asserts its inconstancy and inability to determine itself alone (which is also key to the Refutation of Idealism), and the 'amplified' account of inner sense that runs through the Deduction and Analogies and argues that the subject alone can synthesize apprehension into objective cognition. Green leaves this aporia in place as an unresolved tension in Kant's thought, but this tension must be extended from the merely subjective, inner and temporal, to include the problematic, yet central, role of space in Kant's Critical philosophy. This extension is found in a *Reflexionen* known as the Leningrad Fragment, but titled 'On Inner Sense' by Kant, and thought to be written around the same time as R6311-17, which deal explicitly with idealism. In the Leningrad Fragment, Kant considers inner sense and the inconstancy of time, in line with the arguments against idealism, and from that extends his argument to an enigmatic concept of 'cosmological apperception,' which has important consequences for both the role of space in his thought and the debate between idealism and realism.

§5.6. The 'Leningrad Fragment,' cosmological apperception and the disruption of space

The Leningrad Fragment deals with many of the same issues and arguments as the *Reflexionen* that elaborate and expand the refutation of idealism but does so with a focus on the problematic doctrine of inner sense instead of idealism *per se*.⁶⁰ As it has been argued above, the refutation of idealism, both in the *Critique* and the *Reflexionen*, is a response to the ‘aporia’ of inner sense as it was problematically set out in the Deduction and a completion of the ‘alternative strategy’ of the Deduction that restricted inner sense to empirical self-perception instead of either apperception or intellectual (self-)intuition. The Leningrad Fragment is thus a reassessment of the problem that prompted the argument of the refutation in light of the developments of that solution—a return from the other (outer) side of the two problematically interconnected doctrines of inner and outer sense.⁶¹

The Fragment starts with a re-articulation of some of the elements of the now-familiar ‘alternative strategy’ of the Deduction and the refutation of idealism that completes it. Kant first addresses the perception of the self in inner sense: “Time is what is merely subjective in the form of inner intuition so far as we are affected by ourselves and hence contains only the way in which we appear to ourselves, not the way we are” (Kant 2010, 364).⁶² This reasserts several arguments familiar from the analysis of Kant presented so far. Firstly, the connection between time as the form of inner sense and self-perception, but this is the ‘limited’ formulation of inner sense, which stresses that it only ever contains appearances. This is the second familiar argument, which

⁶⁰ Much interpretation of the fragment emphasizes the problematic nature of Kant’s doctrine of inner sense, referring to it as either “notoriously difficult” (Zoeller 1989, 267), “notoriously obscure” (Baum 1989, 282) or “most obscure” (Robinson 1989, 272).

⁶¹ Robinson cautions against taking any of the *Reflexionen* too seriously as their aims and contexts are unknown (1989, 271-2). He does, however, concede that the Leningrad Fragment has enough crossover and context with Kant’s published writing, in particular the Refutation of Idealism, to make it of interest to understanding those writings. At the very least, the *Reflexionen* show Kant working through whatever problem they address and as the argument being developed in this thesis is that space is a problem or issue that is central to Kant’s work, and related to the problematic issue of inner sense that runs throughout his Critical philosophy, any treatment of these issues, and especially problematic or unresolved ones, supports the argument.

⁶² The Leningrad Fragment only came to light in 1986 in the Russian Journal *Voprosy Filosofii* and thus is not included in the *Akademie Ausgabe* edition of Kant’s work (Zoeller 1989, 264). References to it are thus to the translation contained in the Cambridge University Press edition of *Notes and Fragments* (2010). It was first translated, and published alongside a transcription of the German, by Hoke Robinson for a special edition of the *International Philosophical Quarterly* in September 1989 (Vol. XXIX, No. 3. Issue No. 115).

stretches right back to Kant's response to the objections of Lambert and Mendelssohn with regard to his argument for the ideality of time in the *Inaugural Dissertation* (see §4.8 above). The 'limited' sense of self-perception through inner sense was, however, also the starting point of the 'alternative strategy' of the Deduction developed in the final sections of the B-Deduction (see §5.2.2 above). Kant repeats this point a few lines later: "I cognize myself but only insofar as I am affected by myself ... that is receptivity" (365). Alongside this discussion of the 'limited' conception of self-perception as inner sense is a reassertion of the basic argument of the refutation of idealism: "We can, namely, represent time only insofar as we affect ourselves through the description of space and the apprehension of the manifold of its representation. ... we would have no inner sense and could not determine our existence in time if we had no outer (actual [*wirklichen*]) sense and did not represent objects in space as distinct from ourselves" (364-5). So far Kant has followed the argument that he worked over in the refutation of idealism in both the *Critique* and the *Reflexionen*, albeit with a focus on the 'limited' version of inner sense.

Continuing along familiar lines, the second paragraph of the Fragment begins with a distinction between "pure (transcendental) apperception" and "empirical apperception," which is initially familiar from §§24-25 of the B-Deduction. Kant immediately elucidates this with the statement that, "The first merely asserts **I am**. The second that I was, I am, and I will be" (365). Again, this rearticulates that the latter, epistemological, apperception is the self-perception of inner sense and its determination of time, it is this sort of self-perception, i.e., inner sense, that the Fragment is concerned with and, as in the 'alternative strategy' of the B-Deduction, transcendental apperception disappears from the argument completely. Kant, however, goes on to describe the distinction between transcendental and empirical apperception using a terminology that is not found anywhere else in his work (Zoeller 266): "The latter is cosmological, the former purely psychological" (365). It is this novel conception of empirical inner sense as 'cosmological apperception' and Kant's development of this idea that is of interest in this Fragment, and which is most pertinent to the issues of spatiality, realism and the refutation of idealism. Kant describes this 'cosmological apperception' in terms that are still familiar from the refutation of idealism:

The cosmological apperception which considers my existence as a magnitude [*Größe*] in time sets me into relation with other things that are, that were, and that will be, for simultaneity [*Zugleichseyn*] is not a determination of the actual in regard to the *percipientis* [perceiver] but rather with regard to the *percepti* [what is perceived], since simultaneity can be represented only in that which can be *perceived* backwards ~~with regard to past time~~ as well as forwards, which cannot be the case with the existence of the *percipientis*, which can occur only *successiv*, i.e., forwards (365).

Many of the elements of the refutation of idealism are present here: the determination of time in terms of magnitude, simultaneity as connected to outer sense and what is perceived, the reversibility of the order of perception for simultaneous things, and finally, the flow of time and inner sense as pure succession. The designation of this as ‘cosmological apperception’ underscores the interrelation of inner and outer sense in the argument Kant puts forward to refute idealism, as apperception refers to self-perception (inner sense) and cosmology to the world (of outer sense) and its external ‘other things.’⁶³ Thus the Fragment, purportedly concerned with inner sense, extends the arguments of the refutation of idealism beyond merely the *reductio* of the idealist position and comes to address the perception and indeed existence of the external world itself. Kant performs this movement in the final sentence of the first page of the Fragment. He first reasserts the argument of the refutation: “Only insofar as I apprehend [*apprehendere*] objects in time and indeed objects in space so I determine my existence in time –” already the argument of the refutation is reversed so that the main focus is not the possibility of time-determination, but rather the apprehension of objects in time and space. The sentence continues after the hyphen, and Kant begins to develop the consequences of this position with regard to the objects in space rather than the determination of the self in time:

⁶³ Green argues that ‘cosmological apperception’ is “anticipated by the cosmological antinomy and the doctrine of the regulative status of the cosmological ideas” (309). The Antinomies, of course, were concerned with the attempt to know the world through reason alone, through the doctrine of rationalist cosmology. As such, they were also closely concerned with questions of the spatial and temporal constitution of the world, especially in the first two Antinomies. As discussed in §2.3.2 above, the discovery of the Antinomies played an important part in Kant’s ‘awakening’ from his ‘dogmatic slumber’ and the ‘great light’ of 1769, which eventually developed into the Critical philosophy. The development from the cosmological questions of the Antinomies to the elusive notion of ‘cosmological apperception’ in the Leningrad fragment thus is concerned with some of the most fundamental elements of the Critical philosophy and transcendental idealism, especially as it is concerned with the issue of the reality of the world.

that I can become conscious of myself *a priori* as in *relation* to other things [*andere Dinge*] even before the *perception* of them, consequently it is necessary that my intuition as something outer [*meine Anschauung als eine äußere*] belongs to the consciousness of my impression as part of the same consciousness, for space [*der Raum*] is the consciousness of this real [*wirklichen*] relation (365).⁶⁴

Up until now, Kant has always stressed that intuition only gives rise to appearances, albeit empirically real appearances; this applies most obviously to outer sense and he has thus focused on how inner intuition also only gives appearances of the self (the ‘limiting condition’ of inner sense from the B-Deduction, and the response to Lambert and Mendelssohn). In this section, however, Kant shifts from discussing the straightforward perception of outer (or ‘other’) things—objects in space—to an *a priori* consciousness of the relation to them that precedes perception (is “even before the perception”). Kant even goes so far as to specifically state that this is a “real relation” and that space [*der Raum*] is consciousness of that relation. This consciousness of the relation to other things in space that comes before their perception is similar to the argument of Kant’s ‘presupposition’ of realism that Guyer develops from his analysis of the refutation of idealism (1987, 323-9), although Guyer’s argument pre-dates the emergence of the Leningrad Fragment from its Russian archive.

Kant continues to elaborate on this on the second page of the Fragment as he argues that,

Although I am affected here, no inference [*Schluss*] is required in order to infer [*schließen*] the existence [*Daseyn*] of an outer object [*äußeren Objects*], because it is requisite for the consciousness of my own existence in time, thus for empirical self-consciousness (of simultaneity [*Zugleich seyns*]) (365-6).

The latter half of this section is another reiteration of the refutation of idealism, including another specification of the importance of simultaneity; but in the first half,

⁶⁴ The translations of the CUP version and that of Robinson differ in the way in which they interpret the line immediately following the “consequently,” especially the section “my intuition as something outer [*meine Anschauung als eine äußere*].” The CUP version reads: “my intuition [of myself] as something outer...” (365), while Robinson puts forward: “my intuition, as an outer [intuition]...” (257). I have retained the CUP syntax, but excluded the insertion of “of myself” as it seems unnecessarily interpretive.

Kant once again argues for some sort of direct knowledge—without inference—of the existence of outer objects. Some care must be taken in interpreting this section and asserting its conclusions, as the knowledge of the existence of objects that it entails is not knowledge in the technical sense of the epistemology of the Critical philosophy, i.e., sensations schematized under the categories. Kant does not use a variety of the word ‘knowledge,’ but rather speaks of either the ‘inference [*schließen*],’ or ‘becoming conscious [*bewusst*]’ of the existence of outer objects. In the next sentence he specifies the immediacy of this consciousness: “I am immediately and originally conscious of myself as a being in the world [*Ich bin mir meiner Selbst als Weltwesens unmittelbar und ursprünglich bewusst*]” (366).⁶⁵ With this Kant ties together self-perception and perception of the world. Considered alone, such a formulation—‘being in the world [*Selbst als Weltwesen*]’—might be taken as a ‘correlationist’ argument in the way that Meillassoux criticizes Heidegger’s notion of ‘being in the world [*In-der-Welt-sein*].’ In the context of the Leningrad Fragment, however, with its reiterations of the refutation of idealism, the emphasis is on the necessity of the reality of the external world for any self-perception, the connection between self and world is because the self must be part of the real world outside of it. Only within, and as a part of, such a world, can the self consider itself through ‘cosmological apperception.’ In expressing the immediacy and originality of this consciousness of what up until now have been defined as outer objects, Kant also extends beyond those objects to speak of the ‘world’ and thus clarifies why he earlier defined this apperception as ‘cosmological.’ Consciousness of oneself as an object via inner sense, also presupposes or requires this immediate consciousness of the existence of the world of outer objects. The use of both ‘world’ and ‘cosmological’ recalls the arguments of the Antinomy and Kant’s eventual explanation of the world as one of the regulative ideas; but whereas in the Antinomy Kant was examining the attempts of reason to comprehend the world, here he has come to the world through an analysis of sensibility alone. Nonetheless, the sympathy between the ‘cosmological’ of the Antinomy and that of the Leningrad Fragment is important, because the structure of the regulative idea relates to how Kant begins to

⁶⁵ Baum notes that the term ‘*Weltwesen*’ is “intentionally ambiguous” and that “though it means an entity in the world, it also means an entity that has a world within itself—it represents the universe in which it is” (284).

develop the account of space that grounds ‘cosmological apperception,’ and is of central importance in the Leningrad Fragment and Kant’s thought as a whole.

The development of space in the Leningrad Fragment is an extension both from and of the Refutation of Idealism presented in the *Critique*. Consequently, its importance and relevance exceeds a simple renunciation of idealism and can be used to address the interpretation of Kant put forward by Meillassoux beyond the remit of the debate between idealism and realism alone. Following his enigmatic assertion of ‘being in the world,’ Kant presents another argument against idealism that goes beyond the *reductio* of ‘problematic idealism’ presented in the *Critique* under the title of the Refutation (although it does use part of that earlier argument), and this argument has further consequences for Kant’s theory and thinking on space. Here he argues that, “that in general something outside me exists [*existire*] is proved by the intuition of space itself [*Raumesanschauung selbst*]” (366). This argument is aimed against the ‘dogmatic idealist’ who declares the external world impossible in itself, and not merely the ‘skeptical idealist’ who doubts matter but admits the inner experience form which the *reductio* of the Refutation commenced. In returning to the notion of the ‘intuition of space itself’ this argument reworks the claim from the Refutation of Idealism that ‘dogmatic idealism’ “has been undercut by us in the Transcendental Aesthetic” (B274), by re-examining, and thus elaborating, the notion of space itself.

Kant argues that the ‘intuition of space itself’ “cannot arise from the form of outer sense nor from imagination” (366). The first distinction, from the form of outer sense, again is a restatement of an argument from the Aesthetic, that space cannot be determined by or abstracted from the objects of empirical experience—“Space is not an empirical concept” (A23/B38). The second distinction, from the imagination, relies upon the argument from the inconstancy of inner sense that also underpins the argument of the Refutation against ‘skeptical idealism’ and shows that spatiality cannot arise from inner flux (see §5.4 above). Kant restates these two distinctions with a bit more clarity later in the Leningrad Fragment when he writes that,

the form of sensible intuition ... must occur in us *a priori*, without needing to infer the latter [the outer] from actual perceptions, for otherwise space [*der Raum*] would not be represented *a priori*, which cannot be derived from any inner determining grounds of the power of representation, since in it everything is represented outside us [*außer uns*], and it is impossible to think of representations as existing in space [*im Raum existierend*] (366).

The assertion of the ‘intuition of space itself’ as *a priori* also emphasizes the connection to the arguments of the Transcendental Aesthetic. This is reinforced by Baum’s description of it as: “space as formal or pure intuition, space as an object of pure intuition (as in geometry)” (287). The example of geometry is especially revealing, as in the Aesthetic Kant uses geometry as “a science that determines the properties of space synthetically yet *a priori*” (B40) to argue that it must precede and ground all empirical sensation, knowledge or experience and also to give insight into the possibility of all synthetic *a priori* knowledge.⁶⁶ With his analysis of what he now calls the ‘intuition of space itself’ in the Leningrad Fragment, Kant returns to and confronts the discussion of space that he commenced in the Aesthetic, but now addresses the issue of space in term of the problems of inner sense and the question of the external world outside us.

Kant connects the ‘intuition of space itself’ to the external world immediately after his distinction of it from the form of outer sense and the imagination. The sentence continues: “consequently, as a real outer sense, it grounds its possibility on something outside of us [*folglich als ein wirklich äußerer Sinn seine Möglichkt auf etwas ausser uns gründet*].”⁶⁷ The duality and difference of the two senses of ‘outer’ here—the ‘real outer sense’ and the ‘something outside us’—spans the equivocation of the ‘empirical’

⁶⁶ This particular description of geometry is taken from the B-Aesthetic, where Kant discusses geometry as apodictic in the “transcendental exposition” of space. He makes a very similar argument in the A-Aesthetic at A24, a section that nonetheless is retained at B39 as part of the “metaphysical exposition” of space. While the ‘transcendental exposition’ of space in terms of geometry is fairly intuitive, and only a recapitulation of an argument already in the A-Edition that Kant simply removes from what he leaves as the ‘metaphysical exposition,’ the ‘transcendental exposition’ of time in terms of motion (B48-9) is more obscure and totally new to the B-Edition. The changes to the B-Edition disrupt the parallel between the expositions of space and time as where the A-Edition has five arguments for each, the B-Edition has four ‘metaphysical’ expositions and one ‘transcendental’ for space and five ‘metaphysical’ and one ‘transcendental’ for time. Whether this is indicative of a prioritization of either space or time, or even an indication of their necessary co-implication and interdependence, is unclear (although motion certainly suggests co-implication rather than something exclusively temporal). For a discussion of the changes between the two versions of the Aesthetic and the strategy of the B-Edition to split the expositions of space and time into the ‘metaphysical’ and the ‘transcendental’ see Allison 2004, 99.

⁶⁷ The English quoted here is from the Robinson translation (1989, 256) as it retains both the ‘real outer sense [*wirklich äußerer Sinn*]’ and the ‘something outside us [*etwas ausser uns*]’ of the German. The CUP translation reads simply: “the possibility of which is consequently grounded on an actual outer sense” (366).

and ‘transcendental’ meanings described in the A-Edition Fourth Paralogism and thus at least gestures towards the transcendental reality of an outside. This gesture turns into an affirmation in the next sentence: “To be affected necessarily presupposes [*setzt*] something outer [*etwas äußeres*], and thus rests completely on a sense” (366). This presupposed ‘something outer’ cannot be the object of outer sense in the empirical meaning—that is, it is not an object correlated to the subject—but instead is something really existing that is necessary to make both outer and inner sense possible.⁶⁸ The argument against idealism and for the existence of the external world has now shifted from the persistence of external objects in space, or even of the self as an object in the world, to the ‘intuition of space itself.’ Baum describes this as a move from a refutation based on “the permanence of something *in* space” to one based on “the permanence of the parts of space itself,” which he deems a “proof *a priori*” (288). It is difficult to describe this ‘presupposed’ reality of outer space as the ‘intuition of space itself,’ and Kant recognizes this. In the next paragraph of the Fragment he observes:

The difficulty really lies in the fact that it cannot be comprehended how an outer sense is possible (the idealist must deny it), for the outer must be represented before an object can be set in it. But if we had no outer sense we would also have no concept of it. But that something outside corresponds to my representation and contains the ground of the existence of it cannot be a perception, and must therefore lie merely in the representation of space as a form of intuition that cannot be derived from the inner sense in which the connection or the relation of things that are different from one another is thought. The ground for not holding this to be a merely inner determination and representation of one’s condition is that the latter lacks that which persists [*Beharrliche*] in the change of representations (366).

Despite his recognition of it, this ‘difficulty’ remains problematic in Kant’s thought. He rules out any comprehension of outer sense in terms of either a determination of inner sense (via the refutation of idealism, which he restates here) or in terms of a ‘perception’ alone (as that is only empirical); but the Leningrad Fragments ends without resolving or elaborating a positive account of this presupposed and incomprehensible ‘representation of space as a form of intuition’ or ‘intuition of space itself’ as the key to the reality of the existence of the external world.

⁶⁸ Again, this ‘presupposition’ is similar to the one that Guyer argues for in his analysis of the refutation of idealism.

In identifying this outer space as a difficulty and thus as what the present thesis has called ‘disruptive’, Kant has, however, already recognized something positive about it, that it *is* problematic and perhaps unresolvable. This now recalls the earlier evocation of the Antinomies, conjured by the use of the terminology of the ‘cosmological’ in ‘cosmological apperception.’ For the Antinomies, and the Dialectic as a whole, are connected to problems that in their very nature are unavoidable *and* unresolvable. Kant’s negotiation of the unavoidable problems of the Antinomy is to maintain the notion of world that the arguments of rationalist cosmology puts forward, but show that it is an illusion produced by the effect of reason on the understanding. He reformulates this ineliminable illusion, in its illusoriness, as a regulative idea that is a necessary part of cognition insofar as it postulates a unified conception of nature towards which knowledge and science endlessly strives.⁶⁹ The ‘cosmological apperception’ of the Leningrad Fragment leads to an account of the ‘intuition of space itself’ as that which must be ‘presupposed’ for any outer sense to be possible at all, and which also is an argument against idealism through its assertion of the reality of the external world, even in its unknowability or un-cognizability. As with the regulative ideas this ‘intuition of space itself’ is not knowable in the technical sense of Kant’s epistemology, but, again as with the regulative ideas, it is also unavoidable and ineliminable. However, unlike the regulative ideas, it is not a product of a process of reason, but rather the presupposition that must be postulated before cognition. Because of this inverse structure, Green argues that the ‘cosmological apperception’ of the Leningrad Fragment responds “to the need for a constitutive rather than regulative” determinability of inner sense (323). Green does not develop the notion of such a ‘constitutive idea’ beyond the inverted similarity to the regulative ideas and there are certainly difficulties in such a simplistic and direct assertion. In the Appendix to the Transcendental Dialectic, Kant unequivocally asserts that, “the transcendental ideas are never of constitutive use” (A644/B672). However, as the transcendental ideas identified in the Dialectic only include the self, world and God, the sort of space identified in the Leningrad Fragment must be something extra and different to these already established ideas. There is an immediate and obvious difference between the treatment of the regulative ideas in the Appendix to the Dialectic and the status of

⁶⁹ See Chapter 2 above for a more detailed account of the Dialectic and the regulative ideas.

space in the Leningrad Fragment in that the regulative ideas arise through the action of reason upon the understanding and thus through the faculty of principles, the space of cosmological apperception is concerned with the faculty of sensibility directly. Furthermore, as was argued in §2.3.3.3 above, the transcendental ideas, as *foci imaginarii*, operate within the ‘empty space’ of the ‘true abyss’ of human reason; and thus there is a promising connection to the account of space developed through the arguments of Kant’s refutation of idealism and its development in the Leningrad Fragment.

§5.7. Empty Space as Idea and the Reality of the Outside

The enigmatic presupposed space of the Leningrad Fragment—whether it is referred to as the ‘intuition of space itself [*Raumesanschauung selbst*],’ ‘something outside us [*etwas ausser uns*],’ ‘being in the world [*Selbst als Weltwesen*] or ‘cosmological apperception’—as a ‘constitutive idea’ that underpins both the reality of the world necessary to the possibility of self-consciousness, and the cognition of inner sense with its determined representations of the world, connects up with what Kant referred to at the end of the Dialectic, in his discussion of God as a necessary being, as the “unconditioned necessity, which we need so indispensably as the ultimate sustainer of all things” (A613/B641). Kant’s discussion of this ‘unconditioned necessity’ is not, however, a straightforward endorsement—this is in the context of the properly critical element of the *Critique*, i.e., the Dialectic. But it does have a particularly *spatial* element to it, for it is precisely this ‘unconditioned necessity’ that is the ‘sustainer of all things,’ just like the necessarily presupposed ‘something outside us’ of the Leningrad Fragment, that Kant describes in the *Critique* as “the true abyss [*wahre Abgrund*]” of human reason, where “everything gives way beneath us” (A613/B641). It was argued in §2.3.3.3 above, that this ‘true abyss’ must also be taken as something positive, as an intrinsic element of the Critical system. The connection between the ‘true abyss’ of human reason and the ‘something outside us’ of the presupposed space of the Leningrad Fragment is evident in another section of the Dialectic, where Kant foreshadows the ‘giving way’ of the ‘true abyss’:

But this footing [*Boden*] gives way unless it rests on the immovable rock of absolute necessity. But this itself floats without support if there is still only empty space [*leerer Raum*] outside and under it, unless it itself fills everything, so that no room [*Platz*] is left over for any further **Why?** – i.e., unless it is infinite [*unendlich*] in its reality (A584/B612).

If the ‘immoveable rock’ of ‘absolute necessity’ is in fact an ‘abyss’ as Kant later argues, then all that remains is the ‘empty space [*leerer Raum*]’ of the outside, which is precisely what is put forward in the Leningrad Fragment as that which must be presupposed for all outer and inner determination and sensation. The ‘empty space’ that remains at the end of the Dialectic after ‘everything has given way beneath us’ is also the same as several iterations of ‘empty space’ that were examined in Chapter 4 above. Firstly, the “empty space” of the field [*Feld*] that lies outside the boundaries [*Grenzen*] of legitimate objective cognition (as the synthesis of sensibility and understanding) as described in the *Prolegomena* §59 (4: 360-1, see §4.5 above). Similarly, the poetic metaphor of the “immeasurable space of the supersensible [*Räume des Übersinnlichen*]” that “for us filled with dark night” (8:137) that Kant used in the *Orientation in Thinking* essay to describe what is beyond legitimate cognition (see §4.6 above). Finally, although it was only mentioned obliquely in Chapter 4, the enigmatic connection that Kant makes between ‘empty space’ and the noumenon, which is now reinforced by the arguments of the refutation of idealism and the development of the Leningrad Fragment, which directly connect space and the reality of the outer world. Kant makes this connection between ‘empty space’ and the noumenon, i.e., the *idea* of the thing in itself, in both the *Prolegomena*, where he cryptically wrote “empty space [*leeren*] (of which we can know nothing –the *noumena*)” (4: 354, see §4.5 footnote 23 above); and in the *Critique of Pure Reason* in the chapter on the distinction between phenomena and noumena:

Thus the concept of pure, merely intelligible objects is devoid of all principles of its application, since one cannot think up [*ersinnen*, ‘give sense’ or ‘be sensible’] any way in which they could be given, and the problematic thought, which leaves a place [*Platz*] open for them, only serves, like an empty space [*leerer Raum*], to limit [*einzuschränken*] the empirical principles without containing and displaying any other object of cognition beyond the sphere [*Sphäre*] of the latter (A259-60/B315)

All of these evocations or assertions of ‘empty space’ can now be connected through the arguments of the refutation of idealism and the Leningrad Fragment. Most

obviously, the ‘true abyss’ of human reason is connected to the ‘empty space’ of the supersensible as both of them are where reason finds itself as it progresses beyond the boundaries of legitimate cognition. But now, when combined with the arguments of the refutation, what initially seems like a purely negative conclusion, *empty space*, can be seen as a positive assertion, that the ‘empty space’ that is found beyond those boundaries is a sort of knowledge, without illegitimate and enthusiastic intellectual intuition, of the reality of the thing in itself: that it can be thought through empty space as a thinking of a constitutive limit condition.

The argument of the Dialectic, which leads to the ‘empty space’ of the ‘true abyss’ of reason, now connects up with the argument of the refutation of idealism, which completed the ‘alternative strategy’ of the Deduction in terms of transcendental time-determination and the elucidation of space and time as outer and inner sense from the Aesthetic. It is ‘empty space’ of the ‘something outside us’ that is both the reality of the external world and also the incomprehensibility of that reality, which results in something like a regulative idea of reason, or rather, a constitutive idea that both makes possible thought of reality but also presents a limit to that thought. The external world cannot be thought in terms of the objects of the world in themselves, but instead must be thought in terms of how ‘empty space’ or the ‘intuition of space itself’ can be thought—‘empty space’ is the limit condition that is the locus of the thought of the real and that through which Kant engages with the real and realism.

§5.7.1. *The Absolute, the Empty and the Real: The Metaphysical Foundations of Natural Science*

Kant develops this notion of ‘empty space’ as an idea in the *Metaphysical Foundations of Natural Science* from 1786 (the same year as the *Orientation in Thinking* essay and just a year before the B-Edition of the *Critique*); and in this context, the postulation of ‘empty space’—in terms of Newtonian absolute space⁷⁰—as an idea of reason has

⁷⁰ This ‘empty space’ is not, however, the void, as in the “mechanical natural philosophy” of atoms and the void, which Kant argues explicitly against in the *Metaphysical Foundations* (see 4: 532-5 & 563, where he distinguishes it from absolute space, see also Friedman 1992, 218-19).

consequences for the possibility of natural science and the empirical investigation of the external world. It also connects the discussion of space in the *Critique* and the *Reflexionen* that deal with the refutation of idealism and inner sense back to the discussions of orientation in both the early 1768 *Directions in Space* essay and the 1786 re-examination of the same issues (see §§4.6-4.7 above).

Michael Friedman argues that the *Metaphysical Foundations* is one of Kant's most important works, which is central to any understanding of the Critical philosophy (2013, 1). He situates this importance in the context of the changes made to the B-Edition of the *Critique of Pure Reason* and especially the charge of idealism put forward by the *Göttingen Review* and Kant's subsequent Refutation thereof (2ff).⁷¹ Just as space plays an important role in Kant's amendments to the *Critique* and his argument against idealism, it is also the main concern of the *Metaphysical Foundations*. This concern, however, is presented in the context of Kant's analysis of natural science and how, following the Critical work of the *Critique*, such science can be grounded metaphysically.

Ultimately, the natural science that Kant provided foundations for is Newtonian mathematical physics (Friedman 1992, 136), which he takes as an example of "instances *in concreto*" of the general metaphysics set out in the *Critique* (4: 278).⁷²

⁷¹ The same contextualization is presented in Friedman's Translators Introduction in the Cambridge University Press publication of the *Metaphysical Foundations* (Kant 2002, 173-9).

⁷² Kant engaged with and was influenced greatly by Newton from the time of some of his earliest works. The 1746 essay *Thoughts on the True estimation of Living Forces* was concerned with questions of dynamics and the *vis viva* debate, an issue that Kant revisits in 1758 with the *New Theory of Motion and Rest*. In the early essay Kant actually expresses an antipathy towards Newton and endorsement of Leibniz (Schönfeld 2000, 67; Watkins 2013). Martin Schönfeld argues that Kant became Newtonian sometime in the late 1740s (2000, 69), a shift which first manifested in the 1754 essay on *The Question, Whether the Earth is Ageing, Considered from a Physical Point of View*, which was concerned with the rotation of the Earth and how it is slowing due to the gravitational forces exerted by the moon (Schönfeld 2000, 81). Kant's most extended engagement with Newton in this early period come in 1755 with the book the *Universal Natural History and Theory of the Heavens or Essay On The Constitution and the Mechanical Origin of the Whole Universe According to Newtonian Principles*. This book deals with the origin and organization of the cosmos by integrating "Newtonian physics into a general system of nature" (Schönfeld 2000, 97) and using universal gravitation as the "single universal rule" (1: 306) that orders the universe and through which we can understand it (see Schönfeld 2006 & 2000, 89-127 for detailed accounts of the context and arguments of the *Universal Natural History*). Many of Kant's cosmological insights developed in the *Universal Natural History* are also important for the later *Metaphysical Foundations of Natural Science*.

As the phrase ‘*in concreto*’ suggests, Kant concern in the *Metaphysical Foundations* is with showing how his Critical philosophy not only supports and underpins the science of his day (and, it could be argued, all future science), but how it does this through an engagement with the real objects of the real world in terms of what Kant describes as the “doctrine of the body” (4: 467 *passim*). Kant restricts natural science to the doctrine of the body in terms of what he calls “*proper science*” as that “whose certainty is apodictic” and where “the fundamental natural laws are cognized *a priori*” (4: 468). Kant first distinguishes the doctrine of the body from the doctrine of the soul, where “the first considers *extended nature*, the second *thinking nature*” (4: 467). Instead of Cartesian dualism, these two doctrines correspond to inner and outer sense and their two forms space and time. In an argument similar to that of Paralogisms, Kant rules out a proper science of the soul due to the inconstancy and flux of inner intuition (4: 471).⁷³ Furthermore, the apodictic certainty of the doctrine of the body, and thus what is ‘proper’ to it as a natural science and as a “separated metaphysics of corporeal nature” (4: 478), is that its concepts are constructed mathematically, and specifically through geometry (4: 470, cf the ‘Transcendental Exposition’ of space in the Transcendental Aesthetic and §10 of the *Prolegomena*). Although his concern in the *Metaphysical Foundations* is primarily with the natural science of the doctrine of the body as a specific metaphysics, late in the Preface Kant goes even further and argues that space is important for general metaphysics. He writes:

It is also indeed very remarkable (but cannot be expounded in detail here) that general metaphysics, in all instances where it requires examples (intuitions) in order to provide meaning for its pure concepts of the understanding, must always take them from the general doctrine of body, and thus from the form and principles of outer intuition; and, if these are not exhibited completely, it gropes [*herumtappe*] uncertainly and unsteadily among mere meaningless concepts. This is the source of the well-known disputes, or at least darkness [*Dunkelheit*], in the questions concerning the possibilities of a conflict of realities (4: 478, translation modified).

This passage relates back to many of the issues and arguments examined in this thesis. Firstly, the claim that the experience made possible by general metaphysics relies

⁷³ He also argues that there cannot be a ‘properly scientific’ doctrine of the soul as any supposed object of study of the soul, as inner intuitions, cannot be separated from that which intuits it and thus “even observation by itself already changes and displaces the state of the observed object” (4: 471).

directly upon the “form and principles of outer sense” is a restatement of the wider argument that Kant makes through the refutation of idealism.⁷⁴ Here, however, Kant also presents two further familiar images: Firstly, that without these specifically outer intuitions general metaphysics could only ‘grope among concepts.’ Kant reuses this image of metaphysics groping among concepts only a year later in the B-Edition Preface to describe the state of the metaphysics of his time (Bxv, see §4.1 above). Secondly, Kant also describes this state of being left ‘groping’ as the source of the ‘darkness’ of the disputes over realities. These disputes are those of the Antinomies and the ‘darkness’ is that same one that which Kant diagnosed in the A-Edition Preface five years earlier (Aviii). In §4.6 above, these two images were combined, along with the “shots in the dark [*blindlings gewagt*]” (A762-3/B790-1) that reason takes as it transgresses the boundaries of experience, into a discussion of ‘groping in the dark’ and linked to Kant’s analysis of orientation and his literal account of groping in a dark room in order to orient oneself in the *Orientation in Thinking* essay, published in the same year as the *Metaphysical Foundations*. That analysis, drawn from Kant’s spatial metaphors, argued that the issues of space and orientation were of central importance to the development and system of Kant’s Critical philosophy, an argument that is now reinforced further by the recurrence of these images in the *Metaphysical Foundations*, a text explicitly concerned with the spatial doctrine of the body and the possibility of both general metaphysics and the special metaphysics that lies at the foundation of natural science.

The natural science of the doctrine of the body, however, does not proceed through geometry alone, nor through an empirical analysis of what ‘makes up’ bodies, but rather through a “doctrine of motion,” because, as Kant argues, the “basic determination of something that is to be an object of the outer senses had to be motion,

⁷⁴ Friedman argues that precisely what “cannot be expounded in detail here” in the *Metaphysical Foundations* is addressed in the General Remark on the System of Principles in the B-Edition of the *Critique* (2013, 8). The General Remark supplements and expands on the Refutation of Idealism and in its own statement of remarkability (to mirror the one in question here) argues that “It is even more remarkable, however, 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) (see §5.4 above for a discussion of the Refutation and the General Remark).

because only thereby can these senses be affected” (4: 476).⁷⁵ The doctrine of motion, and Kant’s definition later in the *Metaphysical Foundations* that “*Matter* is the *moveable* in space” (4: 480), directly leads on to his engagement with Newtonian physics and especially the issues of the differences between relative and absolute motion, relative and absolute space, and finally, apparent and true motion. These arguments also return to several issues already addressed in this thesis: the treatment of Leibnizian relational space and Newtonian absolute space in the 1768 *Directions in Space* essay (which was Kant’s first treatment of orientation and incongruent counterparts and lead to the first insights—the ‘great light’ of 1769—of the transcendental idealism, see §4.8 above); and also to the question of the appearance and reality of the world as expressed through Kant’s metaphor of the Copernican Revolution and Meillassoux’s charge that this is ultimately a Ptolemaic counter-revolution (see §2.1.3 above). Kant’s treatment of the literal problem of apparent and true motion—explicitly with regard to the movement of the planets and thus directly applicable to the Copernican/Ptolemaic problem—in the *Metaphysical Foundations* and the account of space that he develops in doing so (alongside the account of the importance of space as the presupposition of the external world developed through the refutations of idealism) returns to the question of the reality of the external world and Meillassoux’s criticism of Kant.

The insight that has led to the present examination of the *Metaphysical Foundations* was the argument that space, in the sense developed from the investigation of the refutation of idealism through the *Reflexionen*, can be considered as a transcendental and regulative idea, which is necessary for the empirical and scientific investigation of the world in terms of specific objects in space. Kant argues explicitly in the

⁷⁵ The emphasis on motion corresponds to the ‘Transcendental Exposition’ of time in the B-Edition Aesthetic. Friedman argues that this exposition “unites” space with time (instead of providing an apodictic science of time as intended in the Exposition). He also references Kant’s General Remark on the System of Principles, added to the B-Edition along with the Refutation of Idealism, where Kant argues that, “motion of a point in space, the existence of which in different places (as a sequence of opposed determinations) first makes alteration intuitive to us” (B292) as a “a deeper ground for the priority of space in the constitution even of inner experience” (Friedman 2013, 10). The argument of the current Chapter has declined to endorse the priority of either outer or inner sense in Kant’s philosophy instead only arguing for at least their interdependence, but Friedman’s argument for an explicit prioritization of space in the B-Edition, at least shows its importance of space and outer sense even if the full extent of that importance and its relation to time remains in question.

Metaphysical Foundations that a certain sort of space—that needed for Newton’s notion of absolute space and the possibility of Newtonian physics in general—is an idea of reason (4: 482 & 4: 560-4 *inter alia*). Such a notion is necessary for the empirical science of space in terms of Kant’s doctrines of the body and motion: the body, matter, is that which is moveable in space (4: 480). Ultimately, this is Newtonian physics, and the metaphysical foundations of the title that Kant aims to provide, are for Newtonian physics. As Friedman observes: “Kant’s primary object of concern [is] the spatio-temporal framework of the *Principia*: specifically the notions of absolute space and absolute time that are fundamental to Newton’s presentation of his theory” (1992, 139-40). Much earlier, in 1768 in the *Directions in Space* essay, Kant claimed to have argued for Newtonian absolute space, but actually presented, in terms of the ‘inner feeling’ of the difference between left and right, an early version of the transcendental philosophy that he was to develop through the *Inaugural Dissertation* and the *Critique of Pure Reason* (see §§4.7-4.8 above for a discussion of this development). The argument from incongruent counterparts is presented again in the *Metaphysical Foundations* as Kant considers how to judge the direction of motion. He gives another list of natural incongruent counterparts such as how hops and kidney beans corkscrew around a pole as they grow, or the rare cases of people whose organs are transposed within their body and have the same internal relation to each other, but also a different directionality. These examples supply, he argues,

a good confirming ground of proof for the proposition that space in general does not belong to the properties or relations of *things in themselves*, which would necessarily have to be reducible to objective concepts, but rather belongs merely to the subjective form of our sensible intuition of things or relations, which must remain completely unknown to us as to what they may be in themselves (4: 484).

He characterizes this as “a digression from our present business” of the doctrine of the body, but also notes that he has examined these arguments “elsewhere” (4: 484). Thus, in 1786, Kant has his fully developed transcendental idealism in hand, including the argument for the ideality of space. Accordingly, he now argues against absolute space as it “can be perceived neither in itself nor in its consequences (motion in absolute space)” and thus is “*in itself* nothing, and no object at all, but rather signifies only any other relative space, which I can always think beyond the given space, and which I can only defer to infinity beyond any given space” (4: 481). Instead, as he has already

argued, “all motion that is of an object of experience is merely relative; and the space in which it is perceived is a relative space” (4: 481). As absolute space cannot be an object of experience, he argues that “To make this into an actual thing is to transform the *logical universality* of any space with which I can compare my empirical space, as included therein, into a *physical universality* of actual extent, and to misunderstand reason in its idea” (4: 482). Transforming the purely logical into a physical, or sensible, thing is, of course the fallacy of subreption that produces transcendental illusions, and this is why Kant warns that such an action, taking absolute space as an empirical thing that can be experienced, is to misunderstand reason and the status and role of its (transcendental or regulative) ideas.⁷⁶ The reference to the regulative ideas, and the earlier arguments taken from the Leningrad Fragment, somewhat pre-empt the conclusions that are to be drawn from the *Metaphysical Foundations*, but this does not mean that the details of the arguments that lead to them, or an examination of their consequences can be omitted.

The disjunction between absolute space and motion as the basis of Newtonian physics and the Kantian preclusion of absolute space as not an object of experience, combined with his aim to provide an account of the doctrines of the body and motion as ‘proper’ natural science, is the central problem of the *Metaphysical Foundations*. Although Newton to a degree assumes absolute motion in absolute space, he nonetheless also recognizes that it is not an object of experience and that it is “a matter of great difficulty to discover, and effectually to distinguish, the true motions of particular bodies from the apparent; because the parts of immovable space, in which those motions are performed, do by no means come under the observation of our senses” (Newton, 12; Kant quotes this in the *Metaphysical Foundations* at 4: 562). Despite this difficulty, Newton believes that it is possible to “obtain the true motions from their causes, effects, and apparent differences” and that this is the project of the *Principia*, or as Newton puts it, “For to this end it was that I composed it” (12). Friedman observes that this obtainment of ‘true motions’ takes place in Book III of the *Principia*, where Newton applied his laws of motion to the objects and observations of the senses to derive the law of universal gravitation and determine “*That the common centre of*

⁷⁶ The problems that reason encounters as it attempts to make its ideas of the world into object are, of course, the Antinomies (see §2.3.2 above).

gravity of the earth, the sun, and all the planets, is immovable” (Newton, 419; see Friedman 1992, 141-2). Thus, Newton works from the apparent motions of observable phenomena, the mass and acceleration of a stone dropped on earth, the movements of the sun and moon, the perturbations in the orbits of Jupiter and Saturn, etc., to eventually infer what he takes to be a fixed, immovable point against which the true movements in absolute space can be determined and discussed.⁷⁷

In light of this process from Book III of the *Principia* and Newton’s claim that the aim of the book is to discover absolute motion and space, Friedman argues that there is an important similarity between this process and Kant’s transcendental philosophy, which is “centrally concerned with elucidating the conditions for the application of spatio-temporal notions in experience” (Friedman 1992, 142). He refers to the fourth chapter of the *Metaphysical Foundations*, titled *Metaphysical Foundations of Phenomenology*, where Kant addresses precisely the issue of deriving true motions from apparent motions in terms of the investigation into the conditions of possibility of any determined apparent motion. In line with the fundamental tenets of the transcendental philosophy Kant observes that, “there is no question of transforming illusion [*Schein*] into truth, but rather of appearance [*Erscheinung*] into experience [*Erfahrung*]” (4: 555). The question here of the relation between apparent and absolute motion and space is thus reformulated in terms of the Critical philosophy in order to emphasize the conditions by which appearances as the objects of the senses are determined as objective experience (in Kant’s technical sense), that is, how natural science is metaphysically grounded. Using this section of the *Phenomenology*, Friedman argues that Kant is “attempting to turn Newton’s argument of Book III of the *Principia* on its head” (1992, 142). Whereas Newton begins with an assumption of absolute space then develops his laws of motion accordingly and eventually uses them to determine the true motions of the solar system from the merely apparent, Kant instead “conceives this very same Newtonian argument as a *constructive procedure for first defining the concept of true motion*” where, “This procedure does not find, discover or infer the true motions; rather it alone makes an objective concept of true motion possible in the first place” (Friedman 1992, 143). It is because the laws of motion define and construct

⁷⁷ See Schönfeld 2000, 94 for a discussion of the importance of the perturbations of the planets for Newton’s lunar theory.

the spatio-temporal framework of Newtonian theory, and thus only under them that the concept of true motion, and objective experience, has any meaning, that Kant considers them *a priori* and the foundation of natural science as the doctrine of the body.

It is in the context of this interpretation of Kant's engagement with Newton that the role of absolute space as a transcendental or regulative idea fully develops. This occurs in the General Remark added to the Phenomenology chapter with which the *Metaphysical Foundations* concludes. Here Kant readdresses the issues of absolute space as the concept that is necessary for Newtonian physics and yet also is never itself an object of experience; because of this he once again argues that it is instead "a necessary concept of reason, and thus nothing more than a mere *idea*" (4: 559). Kant then sketches the form of his argument that absolute space and motion can never be constructed out of any empirical motion. These motions are always relative to and conditioned by their relation to the extended space in which they move "*ad infinitum*" so that, as Kant concludes, "all motion or rest can be relative only and never absolute" (4: 599). If all motion and rest is relative, however, then there can be no concept of motion or rest, even in its relativity, that is valid for all appearance, there is no general concept of relative space. Thus Kant concludes that, "one must think a space ... [that is] not conditioned in turn – that is, and absolute space to which all relative motions can be referred" (4: 559). Although it cannot be constructed from relative motion, it is only through the concept of absolute space that any relative motion can be considered, and thus Kant summarizes absolute space as

not as a concept of an actual object, but rather as an idea, which is to serve as a rule for considering all motion therein merely as relative; and all motion and rest must be reduced to absolute space, if the appearance thereof is to be transformed into a determinate concept of experience (which unites all appearances) (4: 560).

This is Kant's complete reversal of Newton's assumption of absolute space, and his transformation of it into an idea as something that makes possible any empirical experience of relative motion. Absolute space is the ideal end point that can never be reached, but is necessary to make all the actual preceding points that lead to it possible. In the parlance of our times, this idea of absolute space is the privileged frame of reference that is necessary for any determinations within it (Friedman 1993, 144).

Later in the General Remark, Kant explicitly articulates this same argument in terms of the ‘*in concreto*’ example of the ‘starry heavens’ set out in Book III of the *Principia* and Newton’s aim to discover the common center of gravity of the solar system as the privileged frame of reference that allows him to obtain real motion and absolute space (4: 561ff). Essentially Kant’s argument is the same as his earlier, more general, presentation of it: that all observed motion is always relative and that a single absolute privileged frame of reference is only an unobtainable ideal. In the case of the solar system and Newton’s meticulous examination of the observable phenomena and his determination of their common center, even this entire system is only relative to another larger frame of reference. As Friedman observes,

For Kant, the center of mass of the solar system is not strictly privileged: the solar system itself experiences a slow rotation around the center of mass of the Milky Way galaxy, and the latter experiences a slow rotation around the center of mass of the entire cosmic system of the galaxies (1992, 149).⁷⁸

⁷⁸ Although the rotation of the Milky Way and even the existence of other galaxies were not proven until the 1920s, Kant postulated both in his *Universal Natural History* of 1755, through the use of analogy and an extension of Newtonian insights about universal gravitation and the laws of motion from Newton’s confinement to the solar system out into the infinity of space. In that work he argues explicitly that, “all the suns of the firmament have orbital motions either around one universal centre point or around many” (1: 250). All of which is put in motion by the Newtonian forces of attraction and repulsion: “attraction [has] set these systems of fixed stars in motion” (1: 309). And that the lack of motion of the so-called ‘fixed stars’ is “only apparent,” because “It is either only an exceptional slowness brought about by the great distance from the common centrepoint of their orbit, or by its imperceptible nature on account of the distance from the point of observation” (1: 251-2). Kant does suggest that there may be a fixed central point to the universe, but he also warns that, “It is certainly true that in an infinite space, no point can properly have the prerogative of being called the centre point” (1: 312). In this work Kant also puts forward his *Nebularhypothese* that some ‘cloudy stars’ are in fact other galaxies, a theory that was later proved correct (Schönfeld 2000, 116), and his hypothesis concerning the formation of galaxies and planets through the accretion of matter due to gravitational attraction, a cosmological theory that was also proved correct and is the basic theory of contemporary cosmology (Schönfeld 2000, 114, but see 89-127 for a detailed discussion of *Universal Natural History*). Interestingly, even in the very early (1755) and purportedly scientific work of the *Universal Natural History*, Kant prefigures the ‘true abyss’ of human reason in the form of the immeasurable darkness of outer space: “There is no end here but rather an abyss [*Abgrund*] of a true immeasurability into which all capacity of human concepts sinks even if it is raised with the help of mathematics” (1: 256). This explicitly connects the vastness of outer space with the abyssal nature of reason as a search for an unconditioned necessity. The *Universal Natural History* also explicitly rejects any teleological anthropomorphism, and compares the position of humans within the cosmos, via an unknown and unattributed quote, to that of lice existing in a ‘cosmos’ of hair, which from their perspective they describe as an “immeasurable sphere and themselves as the masterpiece of creation” (1: 353; see also Schönfeld 2000, 101). This inhuman understanding of the cosmos,

The Kantian consideration of the cosmos thus extends ever outwards into literal outer space searching for a common center upon which to base all absolute motion, like someone in a dark room who gropes about to find a recognizable object with which to orient themselves, but in that dark outer space we only ever encounter more and more relations and more and more relative motion.⁷⁹ As the parallel between the

and even the insect metaphor, pre-empts contemporary thinkers who use Meillassoux's displacement of the subject as a starting point for an exploration of the unhuman world and the mistaken hubris involved in humanity's sense of self-importance (see in particular Brassier 2007 & Thacker 2011, 2015a & 2015b).

⁷⁹ Friedman provides a much longer examination of Kant's engagement with the arguments and details of Book III of the *Principia* and the problems faced by this engagement especially with regards to universal gravitation, which is not considered here (1992, 149-59). It is worth noting, however, that Newton's universal gravitation is precisely a sort of dynamical community of co-existence and interaction (*commercio*)—and indeed *simultaneous* or immediate interaction at a distance—argued for in the Third Analogy. Furthermore, this extension outward into literal outer space also has a conceptual counterpart as Kant's thought can also push outwards not just in *outer* space but also into *other* spaces, namely different conceptions of geometry other than the Euclidean geometry that Kant explicitly references. Kant's sole reliance on Euclidean geometry as the apodictic science of space is sometimes put forward as a limitation or disproof of his entire philosophy given that since his time other non-Euclidean geometries have been discovered. In Chapter 1 of *Kant and the Exact Sciences* Friedman addresses this criticism and argues that there is a connection between Kant's reliance on Euclidean geometry and the monadic syllogistic logic of his time, whereas non-Euclidean geometries make use of polyadic logics developed since Kant's times (58-9). Friedman argues that the discoveries of non-Euclidean geometries produced using alternative logic proves that Euclidean geometry is not analytic and thus adds strength to Kant's argument that geometry is synthetic rather than disproving his entire system; as Friedman puts it, “the discovery of non-Euclidean geometry should be seen as a vindication of Kant's conception [of geometry as synthetic and space as intuitive]” (81). It is merely that Kant, due to the restrictions and limitations of the logic and geometry of his time could not make use of these other geometries in his system, but this does not mean that he precludes them entirely. Furthermore, the connection between the Euclidean nature of our intuition means that non-Euclidean geometries as somewhat independent of sensible intuition remain “empty” and thus only a “rational *idea* of space” (Friedman 1992, 94). Within this idea of space there is room for the discovery of more and more geometries through different types of logic, and thus a progression into other spaces as well as outer space. Friedman examines the wider issue of the possibility and problems of a changing and ‘relative,’ but still Kantian, *a priori*, which develops in response to changes in the empirical sciences, such as the displacement of Euclidean by non-Euclidean space in the theory of relativity, in his *Dynamics of Reason* (2001). The modifiability or adaptation of the *a priori* (or categories or even ‘the transcendental’) has also been recently postulated by Catherine Malabou, who uses the biological sciences of epigenetics and neurobiology as her model of change rather than the example of the history of physics (2016, see page 180 *inter alia*). As both Friedman and Malabou argue, Kant's engagement with the natural sciences changed and expanded over his life time, from the strict and exclusive consideration of Newtonian physics in the First *Critique* and the *Metaphysical Foundations*, through to the engagement with the life sciences in the Third *Critique* (Malabou 2016, 161, 168; Friedman 2001, 126) and with chemistry in the unfinished *Opus Postumum*, which was

cosmological search for a fixed and absolute point and Kant's example of literal 'groping in the dark' suggests, his notion of orientation, becomes important for the possibility of engaging with space as the locus of the thought of the reality of the external world.

The unending search for a fixed point as the mass center of the universe is another reason why Kant presents absolute space as an idea, and the Newtonian laws of motion as the *a priori* means whereby the progress towards and necessity of that idea can be demonstrated. Immediately after this analysis of how natural science endlessly spirals into outer space in search of the "common center of gravity of all matter" (4: 563) and the absolute space of the most privileged frame of reference (a 'spacing out' so to speak⁸⁰), Kant connects this very specifically to the notion of 'empty space':

To the various concepts of motion and moving forces there also correspond the various concepts of *empty space* [*leeren Raume*]. Empty space in the phoronomical sense, which is also called absolute space [*absolute Raum*], should not properly be called an empty space; for it is only the idea of a space (4: 563).

influenced by the contemporaneous rethinking of chemistry by Lavoisier (Friedman 2001, 124-126).

⁸⁰ On this phrase and a similar discussion of many of the issues presented here see Arnd Wedemeyer's essay 'Kant Spacing Out' (1994), which combines Kant's discussion of space in the Transcendental Analytic with his critique of the soul in the Paralogisms and the limits of thinking the self to argue for a "Transcendental Paralytic" of empty space (381) that is related to the *focus imaginarius* of the transcendental ideas (397). Wedemeyer, however, also extends his analysis of Kant's treatment of space beyond the scope of the current thesis to consider the *Opus Postumum*. Friedman also presents a detailed analysis of the *Opus Postumum* in Part Two of *Kant and the Exact Sciences*, which has consequences for the theory and role of space in Kant's thought as a whole. Similarly, Green promises that his analysis of the 'aporia of inner sense' will lead to a forthcoming publication on the *Opus*, which he claims deals with many of the issues and problems that he diagnosed in Kant's doctrine of inner sense (300N4). Martin Schönfeld makes the tantalizing observations that, in the *Opus Postumum*, "the ether expanded into an unlikely material basis of the transcendental turn, and Kant offered an *a priori* demonstration that presupposed, in all earnestness, the existence of the ether for the validity of the critical account of cognition" (2000, 85). The evocation of a possible transcendental materialism certainly would be interesting to compare with Meillassoux's 'speculative materialism.' However, for reasons of brevity, the *Opus Postumum* is not examined or engaged with in this thesis, but its existence and the potential for complications to the arguments presented here are noted. Despite the lack of engagement with the *Opus*, merely noting that the issue of space continued to occupy Kant right up until his death adds weight to the basic argument of this thesis: that space has a central role within his thought.

This reasserts absolute space as an idea of reason, but it now also articulates this absolute space in terms of the empty. Kant goes on to argue against empty space in the sense of the void, but ultimately presents his consideration of ‘empty space’ as a dialectic: “this refutation of empty space proceeds entirely hypothetically, for the assertion of empty space fares no better” (4: 564), which reasserts the ideal notion of space and the account of absolute space as an idea. It also presents an ironic twist to the *Metaphysical Foundations*, which Kant notes rather ruefully in the final paragraph of the work:

And so ends the metaphysical doctrine of body with the *empty* [*dem Leeren*], and therefore the inconceivable, wherein it shares the same fate as all other attempts of reason, when it strives after the first grounds of things in a retreat to principles – where, since its very nature entails that it can never conceive anything, except insofar as it is determined under given conditions, and since it can therefore neither come to a halt at the conditioned, nor make the unconditioned comprehensible, nothing is left to it, when thirst for knowledge invites it to comprehend the absolute totality of all conditions, but to turn away from the objects to itself, so as to explore and determine, not the ultimate boundaries [*Grenze*] of things, but rather the ultimate boundaries [*Grenze*] of its own unaided powers (4: 564-5, translation modified).

That the investigation into the doctrine of the body ends with the idea of the empty underscores the properly *critical* element of the work and its place within Kant’s Critical philosophy. It returns to the ‘fate’ of reason—as in the “peculiar fate” of the very first line of the A-Edition (Avii)—that it cannot discover its own unconditioned ground, but can only ever aim to establish the boundaries over which it always illegitimately steps as it chases after illusory objects, of which absolute space is another example. With such a conclusion it is no surprise that Kant was to go back and readdress the *Critique of Pure Reason* itself and make the changes that would result in the publication of the B-Edition only a year later. As argued throughout this Chapter, however, the changes made to the B-Edition, and especially the addition of the Refutation of Idealism, are intricately concerned both with space and the reality of the external world (as the world of objects examined by natural science).

§5.8. Conclusions: ‘Empty space,’ Real and Apparent motion, and the Navigation of the Real

Although at the end of the *Metaphysical Foundations* Kant once again retreats into the more restrained Critical project of determining the boundaries and limits of legitimate cognition, he has nonetheless developed some further positive outcomes for the notion of ‘empty space’ as a transcendental idea or constitutive limit, and the issue of space as the locus for the engagement with the real. In the first instance, the connection between space and an engagement with the real, as the empirically real, is very directly stated in the *Metaphysical Foundations* in terms of the doctrine of the body as ‘proper’ natural science. Kant endorses Newtonian science as an ‘*in concreto*’ empirical application of transcendental idealism, even if it does require the metaphysical underpinnings supplied by the Critical philosophy and the *Metaphysical Foundations*. As such, Newtonian science provides the means and method through which to know the world as it is in its empirical reality; and, as a doctrine of the body in terms of motion in space, the reality revealed and known through Newtonian science is very definitely spatial. Kant unequivocally endorses the scientific process and the knowledge it produces. This is reflected in the new Preface of the B-Edition of the *Critique* only a year later, which emphasizes the connection and sympathy between the Critical project and that of the sciences (see especially Bxii-xiii & Bxxii). As limited to the ‘empirically real’ of appearance, this connection between space and reality could be considered entirely in line with the ‘ontological reduction’ of the ‘outside’ from the A-Edition Fourth Paralogism, which would be in accordance with Meillassoux’s critique of the ‘radical exteriority’ of ‘correlationism.’ However, the *Metaphysical Foundations*, provides another, second, account of space, not merely in terms of the empirical science of the doctrine of the body, but instead in terms of the evocation of the ‘empty’ with which Kant concludes the book, which is connected to the argument of the refutation of idealism and its assertion of the reality of objects ‘outside us’ that is not constrained by the ‘ontological reduction’ but provides the locus of an engagement with reality in a more fundamental sense.

The ‘empty space’ that Kant encounters at the end of the *Metaphysical Foundations* aligns with all the other enigmatic evocations of ‘empty space’ explicated so far throughout this thesis. Most obviously, as an idea of reason it connects directly to the ‘dark night’ of the ‘immeasurable’ space of the supersensible in the *Orientation in Thinking* essay (see §4.6 above), the ‘empty space’ beyond the bounds of objective cognition, i.e., the space ‘outside’ any boundary that is an essential element of the

boundary as such (the space out on the ocean beyond the island of truth, to use Kant's geographical metaphor. See §§4.3 and 4.5 above), and the 'true abyss' of reason in the Ideal of Reason (see §2.3.3.3 above). But as an idea of reason, it is also connected, via the Leningrad Fragment and its argument for the necessity of 'something outside us' that Kant can only articulate in terms of 'the intuition of space itself' [*Raumesanschauung selbst*] or 'being in the world' [*Selbst als Weltwesen*], which cannot be objects of perception but which are nonetheless the ground for the possibility of perception as something like a regulative or constitutive idea, to 'cosmological apperception' and the argument of the Refutation of Idealism. That is, the argument that the temporally determined self-perception of inner sense requires outer sense and the existence of permanent things in space outside us. In turn, this is the completion of the 'alternative strategy' of the Deduction in terms of time-determination and thus key to the entire Critical system (see §§5.6-5.7 above) and the Critical reconfiguration of the principle of sufficient reason (see §3.2 above). These two discussions of space—the 'outside' beyond the boundary of legitimate knowledge and the real 'outside' necessary for the determination of inner sense—can now be brought together to argue that the means through which outer sense engages with the reality of the external world by outer sense is in terms of *orientation*, and that through this the real can be navigated and objective knowledge and its boundaries and limits established.

The *Metaphysical Foundations* provides an example '*in concreto*' of this orientation in terms of the process that deduces absolute space via the 'groping' in outer space of Book III of the *Principia* and the (unending, in Kant's analysis) search for the fixed mass center of the universe against which absolute motion can be determined. The specificity of this example, insofar as it is concerned with the relation between the apparent and true movements of the planets and stars, also directly connects back to the debate between the Copernican (Keplerian and Newtonian) and Ptolemaic understandings of the heavens and the movements of celestial bodies. This concrete examination of this confrontation now provides a way to reassess the claim put forward by Meillassoux that Kant's transcendental and Critical intervention in philosophy was a (metaphorical) Ptolemaic 'counter-revolution' against the Copernican revolution of science that reduces the real world of the 'great outdoors' to mere appearances correlated to subjects. For just as the issue in moving from the

apparent motion of the Ptolemaic system to the real motion of the Copernican system (and in doing so recognizing the distinction between the two) is concerned with the Newtonian determination of absolute space and motion through the orientation of a privileged frame of reference around a common mass center, so too is the Kantian engagement with the real via appearances in his own ‘Copernican’ system of transcendental idealism, concerned with the issue of orientation in absolute space (as an idea) through the distinction between the left and the right of incongruent counterparts and the subsequent ‘groping’ made possible by that orientation through which reality is slowly determined.

§5.8.1. Directionality, Orientation and the Refutation of Idealism

In Chapter 4 above, the issue of orientation was first approached from the context of the *Orientation in Thinking* essay in terms of navigating the supersensible realm beyond the boundaries of legitimate cognition. From there it was connected back to the earlier *Directions in Space* essay and the role it played in the development of Kant’s thought in terms of the ‘great light’ of 1769 (see §§4.6-4.7 above). However, the present Chapter’s elucidation of space in the Critical philosophy now provides the means for a re-assessment of the arguments about space in terms of orientation and directionality in order to show how they connect with the role that space plays in the refutation of idealism and as something necessary for the determination of time in inner sense. This connection between the refutation of idealism and the importance of directionality and orientation developed from the example of incongruent counterparts has been examined before: notably, by Hoke Robinson, who argues that “Kant could have developed another, parallel refutation of idealism based on the argument from incongruent counterparts – one which may also be somewhat less obscure” (1981, 393); and Robert Hanna, who concludes that when the Refutation of Idealism is “supplemented by some points from ‘Directions in Space’ and ‘What is Orientation in Thinking?’ it also refutes skeptical idealism and establishes direct perceptual realism”

(2000, 173).⁸¹ These two arguments make the connection in different ways, Robinson constructs an alternate refutation of idealism from Kant's discussion of directionality, while Hanna instead uses directionality to supplement the Refutation from the *Critique*. Kant, of course, never explicitly makes either of these arguments even if they are direct developments of his thought. Bringing them together, however, shows how his thought progressed and developed: from the discussion of space in 1768 which precipitated the transcendental turn, through the 'amplification' of time in the A-Edition of the *Critique*, which obscured the importance of space but revealed the issue of time-determination and inner sense as a problematic key to the transcendental theory of experience (which also lead to the problems and charges of idealism), and finally to a reconsideration of space, directionality and orientation as the important solution to the issue of time-determination in the Refutation of Idealism in the B-Edition of the *Critique*. Thus, the direct connection between Kant's discussion of the directionality of space and the role that space plays in the refutation of idealism in terms of securing the possibility of experience as determined in time, also addresses his reconfiguration of the principle of sufficient reason in terms of time-determination, and furthermore, also Meillassoux's temporal philosophy and the problems it encounters in terms of the indeterminability of 'hyper-chaos' and the necessity of the spatial metaphor within the challenge of 'ancestrality' (see §3.4 above).

The arguments of both the Refutation of Idealism and of how Kant uses directionality and incongruent counterparts to dismiss the Leibnizian relational theory of space and assert the exteriority of space have both been addressed above (§5.4 and §4.7

⁸¹ Hanna draws a particularly strong version of realism from Kant as shown in the language of 'direct perceptual realism' and later 'distal material object.' However, despite the strength of that realism—what he calls "the truth of externalism"—he nonetheless concedes that, "Kant's Refutation of Idealism fails to establish the veridicality of our outer perceptions of distal material objects" (173). He concedes that this "will not satisfy traditional refuters of idealism," who also want "a *veridical* access which *justifies* perceptual statements" (172). In terms of Kant's transcendental idealism, of course, this sort of issue of the veracity of perception is not applicable, as Kant's 'perceptual statements' apply explicitly to appearances and not to things in themselves in the way 'traditional refuters' desire. It is worth noting, however, that Hanna's version of Kant's refutation, and indeed Kant's refutation itself, on this analysis, is sufficient to satisfy Meillassoux's version of realism, for which the veridicality of perceptions is to a degree irrelevant as the realism of 'speculative materialism' is ascertained by reason alone. It is because of this disjunction between the reality of hyper-chaos discerned by reason and the perception of the world that Meillassoux's system encounters difficulties in terms of his own treatment of the empirical sciences (see §3.4 above).

respectively). The connection between the argument from/about directionality and the refutation of idealism, either in terms of a supplement in the case of Hanna or an independent development as in Robinson, comes from the fact that the argument from directionality and the importance of directions for space (underpinned by the discussion of incongruent counterparts), shows that it must be something outside us, that spatiality cannot be constructed or construed internally by a subject through the knowledge of mere relations. In terms of the development of Kant's transcendental idealism and the 'great light' of 1769, this led him to the recognition that spatiality must be an intuition (of something outer) and not a construction of the understanding or reason alone, which prompted the more general separation of the faculties of sensibility and understanding (see §2.3.2 above). In Hanna's 'supplementation' of the Refutation of Idealism, the exteriority of directionality and the necessity of what he calls a "3-D egocentric frame of reference" (169) is an elaboration of the outer sense and the external and persisting substance it intuitively requires required by the Refutation of Idealism in order to make possible the temporally determined inner sense of experience, which is the starting point of the *reductio* of the Refutation. For Robinson, the exteriority of the spatiality of directions is enough to act as a refutation of idealism on its own, although he does recognize that it can be combined with the argument of the Refutation in the *Critique* in order to be made "more general" by showing that the "'feeling' [of directionality] cannot be derived from *inner* sense: left and right must be *simultaneous* differences. But simultaneous differences cannot be represented in time alone: space is required (cf. the Third Analogy)" (1981, 397). Hanna also recognizes the importance of the Third Analogy and simultaneity, which plays an important role in the Refutation of Idealism, but does so in order to argue for the necessity of a causal relation between the subject and a "distal material object" (171), via the fact that they are both members of a dynamical community.⁸² Hanna's emphasis on how spatiality and realism is connected to the existence of the subject in a dynamical and causal

⁸² The importance of the Third Analogy and its explication of simultaneity in terms of the thoroughgoing interaction, or *commercio*, of a dynamical community were discussed above in §3.2 and §5.5. The first of those discussions was in terms of time-determination and causation, which is the explicit content of the Analogies, but the second discussion emphasized how the simultaneity of substances in space relates to spatial positions and thus the place or location of objects in space (which is nonetheless vital for the determination of time according to the Refutation of Idealism). It is this discussion of the Third Analogy that is important for the issues of orientation in question here.

community with the objects of the world, also reveals another aspect of this bringing together of the Refutation of Idealism and Kant's discussion of directionality, the importance of orientation and the determination of a location.

Hanna uses the *Orientation in Thinking* essay to argue that Kant's refutation of idealism, 'supplemented' by the arguments about directionality, not only provides a *reductio* of skeptical idealism, but that it argues for what he calls a "direct perceptual realism" that proves the relation between the subject and the dynamical community of substantive objects outside of the subject. The key to this, in Hanna's argument, is the body of the subject, which is both itself a persisting substance and also one that orients the world around itself and determines its own location within that world. As Hanna summarizes his reconstruction of Kant's refutation, via the 'supplementation' of directionality: "we can derive a profoundly Kantian doctrine to the effect that to be self-consciously aware of my own uniquely determined psychological life is automatically also to be intuitionally aware of my unique location – and also of the unique locus of movement – of my own body in space" (171).⁸³ The realism of this argument still retains the form of Kant's *reductio* from the *Critique*, but in the very next sentence Hanna reformulates this conclusion with a phrase more in line with the Leningrad Fragment: "All human empirical apperception is 'orienting apperception'" (171). The Leningrad Fragment emphasized the necessity of space for the determination of time in empirical apperception by reinterpreting it as 'cosmological apperception' and examining the role of the 'intuition of space itself' and 'being in the world,' but Hanna's formulation of 'orienting apperception' clarifies and elucidates how the apperceiving subject is 'in the (external) world' spatially: it is through orientation.

The specification of orientation as the means that a subject encounters space and is within the space of the external world fills in what Kant often leaves as problematic or

⁸³ Hanna recognizes that with this emphasis on embodiment Kant "anticipates" theories of the 'embodied mind' such as Merleau-Ponty (169). While Kant does use the human body, and especially the hands, as a prime example of incongruent counterparts and the possibility of orientation, it is not the only, nor the necessary condition of directionality and orientation. In this way the issue of the directionality of space and the possibility of orientation escapes the criticism that Meillassoux makes of the body as a retro-transcendental condition of knowledge (see §3.3.1 above). Rather, for Kant it is the existence (and persistence) of substantial bodies, including hands, bean shoots and spherical triangles etc., in directional space that is important.

an enigma. For example, in the Leningrad Fragment Kant explicitly states that despite all the work done in the Fragment (and the other versions of the refutation of idealism) to show the necessity and reality of space and outer sense, “The real difficulty lies in the fact that it cannot be comprehended how an outer sense is possible ... for the outer must be represented before an object can be set in it” (Kant 2010, 366).⁸⁴ Again, it is the directionality of space and the ability of the subject to orient itself in space that is the condition of possibility of that outer sense. Indeed, Kant actually argues this in the earlier *Directions in Space* essay, although it is obscured behind his discussion and confusion over absolute space. There he argued that, “our considerations make the following point clear: absolute space is not an object of outer sensation; it is rather a fundamental concept [*Grundbegriff*] which first of all makes possible outer sensation” (2: 383).⁸⁵ In §4.7 above, this section was used to argue for how the *Directions in Space* essay was a precursor in the development of the transcendental idealism and its shift to examining conditions of possibility. That analysis problematized Kant’s relation to Newtonian absolute space insofar as the turn inwards of the transcendental philosophy was in tension with the absoluteness and externality of Newton’s absolute space. Now, after the explication and analysis of the progression of the two Editions of the *Critique*, the *Reflexionen* dealing with the refutation of idealism and the *Metaphysical Foundations*, the full implications of this argument can be developed further and the connection between orientation, absolute space, realism and the external world in Kant’s philosophy set out.⁸⁶

⁸⁴ The A-Edition Paralogisms also recognize the opacity or obscurity, the ‘darkness’ to use the equivocation of the German ‘*Dunkelheit*,’ of outer sense as a “gap in our knowledge” (A393; see §5.1 above).

⁸⁵ The ‘*Grund*’ of this *Grundbegriff* can now be understood in terms of all the ‘*Grunds*’ encountered in Kant and how they contain a connection to absolute space. Most important is the principle of sufficient reason [*Satz vom zureichenden Grund*] and its connection to Hume’s problem and the issue of cause [*Grund*], which as Kant reconfigures it in terms of time-determination depends upon the reality of persistent and spatial external things. But also in terms of the abyss [*Abgrund*] revealed at the end of the Ideal of Pure Reason, which, as has already been noted, has a very specific spatial element.

⁸⁶ With this recognition of the role that space played in the development of the transcendental philosophy in 1768 with the *Directions in Space* essay, and the importance of the rectification of the problems of the initial version of the Critical philosophy in the A-Edition through the re-engagement with space in 1786-7, i.e., *Orientation in Thinking*, the *Metaphysical Foundations*, and the B-Edition, it is possible to understand space as both the *way in* to transcendental idealism and the *way out* of the problems of idealism that Kant encountered in his first overly-

Beyond the direct connection to the possibility of outer sensation, the main issue here is the relation between orientation and absolute space. The earlier discussion of the *Directions in Space* essay identified this as a tension: that the externality of Newtonian absolute space that Kant attempts to argue for in this essay is in conflict with his conclusions about directionality as an ‘inner feeling’ or ‘fundamental concept.’ The subsequent development of transcendental idealism and especially the arguments that Kant puts forward in the *Metaphysical Foundations* concerning absolute space as a transcendental idea, or a limit condition that itself makes possible any doctrine of the body and external sensation, now elucidates and mitigates this tension. And again, the elucidation of absolute space in the *Metaphysical Foundations* relies upon orientation in space, only now not of a person in a dark room, but of the movements of the Earth, planets, sun, solar system, stars, the galaxy and, ultimately, the universe itself. It is the ongoing and endless task of the orientation of the universe, performed through a ‘groping’ ever outwards into literal outer space, towards the starry heavens themselves, that legitimizes the concept of absolute space as the fundamental concept [*Grundbegriff*] that makes possible the outer sensation that is necessary for the temporal determination of inner sense and which requires the reality of substance outside us.⁸⁷

§5.8.2. Meillassoux and Kant on Time, Time-Determination and Space: ‘Correlationism’ and the Refutation of Idealism

temporal version of transcendental idealism in the A-Edition. This formulation of the ‘way in’ and ‘way out’ paraphrases Jacobi’s criticism of transcendental idealism in terms of the enigmatic role of the thing in itself. Jacobi argues that, “*without* that presupposition [of the thing in itself] I could not enter into the system [of transcendental idealism], but *with* it I could not stay within it” (Jacobi, 336, see also Kuehn 2001, 327 for some discussion of this criticism). This, of course, is an early identification of the problem of the reality of the external world for transcendental idealism, similar to the ones that Meillassoux raises in *After Finitude*. The present Chapter, however, has argued that it is not the thing in itself that is at issue in Kant’s engagement with the external world, but rather space, and as such, space as the presupposition of ‘absolute’ or ‘empty’ space provides the *way in* to the transcendental system, and also the *way out* in terms of the empirical engagement with the ‘doctrine of the body,’ which eventually leads to absolute space as an idea, that makes it possible to both remain in the system and also have access to the external world.

⁸⁷ It is because it depends upon the orientation of and by the stars that this could be referred to as a *sidereal* realism.

The connection between Kant's discussions of space in terms of directionality and orientation and the arguments he uses to refute idealism is important because in returning to the argument of the Refutation of Idealism as the completion of the 'alternative strategy' of the Deduction, it also recalls the issue of the possibility of time-determination as the problem that is at the heart of both the task of the Deduction, with its aim at legitimizing objective knowledge/cognition/experience (see §5.3 above), and also the reconfiguration of the principle of sufficient reason, which is set out in the Second Analogy of Experience precisely in terms of time-determination (see §3.2 above). It is this latter issue—of the reconfiguration of the principle of sufficient reason in terms of time—that was the main parallel between Kant and Meillassoux. Within this parallel, however, it is also the issue of the determination of time that was the main disjunction between Kant and Meillassoux. This is because for Kant, the determination of time was precisely the way in which he resolved the problem of sufficient reason, after the destruction of dogmatism and the problems raised by Hume were resolved, while for Meillassoux, the question of the determination of time and chronology was a problematic element within his reconfiguration of the principle of sufficient reason in terms of the 'principle of factuality' and the 'hyper-chaos' of time. The two heterogeneous forms of time in Meillassoux—the chronology of 'ancestrality' and the eternality of 'hyper-chaos'—are examined respectively in §3.3.1 and §3.3.2 above, and the problems that Meillassoux encounters because of this heterogeneity in §3.4. Importantly, many of the problems around the determination of time that Meillassoux encounters in his temporal reconfiguration of the principle of sufficient reason appear in the way in which he uses spatial metaphors; notably the metaphor of the straight line to organize the flow of time into chronology and the 'great outdoors' to describe reality. What the present Chapter argues is that it is precisely through such spatiality in terms of its ability to represent different times simultaneously along a straight line, and also its perception of a persisting substance outside us, which ultimately is an account of the reality of the external world, that Kant completes his theory of time-determination in the Refutation of Idealism. Hence, that which is a problem for Meillassoux's system of 'speculative materialism' based upon the 'hyper-chaos' of the 'principle of factuality' and developed through the challenge of the 'ancestral' to 'correlationism,' is exactly that which Kant confronts and examines in the Refutation of Idealism as the completion of the task of the Deduction: the necessity

of the existence of the external world for the determination of time in inner experience and thus the legitimacy of objective cognition and an account of the Critically reconfigured principle of sufficient reason. Meillassoux, of course, simply dismisses the Refutation of Idealism *tout court* as part of his strategy of criticizing Kant via the charge of ‘correlationism’ rather than idealism (Meillassoux, 2007, 408; see §2.1.1 above). He thus never confronts the issue of the relation between time and space and its importance for time-determination in Kant’s system, all of which are also problems within the system that he aims to construct in place of that of Kant.

Meillassoux’s dismissal of the Refutation of Idealism is, however, only one element in what can now be described as a somewhat systematic misinterpretation of Kant. It joins a whole series of contentions claims that Meillassoux makes about Kant that have been addressed and criticized throughout this thesis and used to elucidate an alternative interpretation of Kant. Firstly, Meillassoux’s claim that Kant only rejects the principle of sufficient reason in the *Critique of Pure Reason* without addressing the much earlier criticisms presented by Kant in the *New Elucidation* (which already begins to reconfigure the principle in terms of time; see §2.3.1 above); secondly, the direct, or even exclusive, connection that Meillassoux makes between the rejection of the principle of sufficient reason and the critique of the ontological argument, which ignores the centrality of the Antinomies and the detailed critique of the difference between transcendental illusion and transcendental error (that latter of which is connected to transcendental realism and thus is an important element in the positive arguments for transcendental idealism and the separation of the faculties of sensibility, understanding and reason; see §§2.3.2-2.3.3 above); thirdly, Meillassoux’s assertion that Kant confronts Hume’s problem in the ‘objective deduction’ rather than in the Second Analogy, which means that he misses entirely Kant’s reconfiguration of the principle of sufficient reason in terms of the determination of time in succession (see §3.2 above); and finally, Meillassoux’s interpretation of the Transcendental Deduction in terms of the A-Edition alone despite the substantial changes that Kant makes to it in the B-Edition (see §3.3.2, footnote 4 of the present Chapter and §5.3.2 above), which are closely connected to the addition of the Refutation of Idealism; and thus it is here that this misreading becomes systematic.

For, as analyzed and argued in the present Chapter, the changes between the two Editions of the *Critique* are concerned precisely with the problem of the

‘amplification’ of inner sense and the role of time in the A-Edition, the recognition of these problems and the necessity of the ‘limiting condition’ of the inconstancy of time, which prompted Kant to pursue the ‘alternative strategy’ of the Deduction in terms of time-determination in empirical apperception and find its ultimate resolution in the argument of the Refutation of Idealism and its assertion of the necessity of the external and spatial world of persisting substance. The ‘amplification’ of inner sense to a form of intellectual intuition in the A-Deduction and the ‘ontological reduction’ of the outside in the A-Edition version of the Fourth Paralogism *is* in line with Meillassoux’s criticisms of ‘correlationism.’ Furthermore, Meillassoux’s own positive philosophy also follows the general outline of his misinterpretation of Kant and its preference for the A-Edition, in that it also presents a sort of amplification of time in the form of ‘hyper-chaos’ (albeit in terms of the ground of becoming rather than the ground of knowing, in the language of the *New Elucidation*). In this amplification of time the problem and possibility of chronological determination, with the disruptions evident in the problematic uses of the spatial metaphor, become all the more acute.

This acuteness is multiplied when precisely that which Meillassoux spurned, the Refutation of Idealism (and its elaborations in the *Reflexionen*), is considered. The augmented Refutation presents not only a solution to the problem of time-determination, but also a proof of both the reality of the external world and how that externality can be known, i.e., precisely the ‘great outdoors’ which Meillassoux accuses Kant of ‘catastrophically’ excluding, to the detriment of all philosophy that followed him (see §2.1 above). The analyses of the refutation of idealism and its arguments for the reality of the external world presented so far have stressed its engagements with spatiality and externality (see §§5.4-5.6 above). They have thus asserted and argued for a central role of space within Kant’s thought. It is important to remember, however, that these arguments and thus the importance of space, ultimately are concerned with the possibility of the determination of time in inner sense, empirical apperception and the legitimacy of objective experience/cognition/knowledge. Earlier interpretations of Kant, such as those elaborated via Meillassoux’s arguments and criticisms, rearticulate and reinforce this important role of time in Kant’s thought. It was, recall, the issue of time-determination, and not space, that Strawson identified as “Kant’s genius” (1966, 29). Nonetheless, Strawson also recognized the importance of space for Kant and its connection to

realism as the “abiding framework” necessary for the determination of time (1966, 27; see §1.5 above). The outcome of the consideration of the refutation of idealism and its bringing to the fore of the central role of space in Kant’s thought is thus not a reversal of the earlier emphasis on the role of time, but an assertion of the necessity of the co-implication of time and space in Kant’s philosophy.

This co-implication is present throughout the Critical philosophy; Kant cannot even discuss time without including simultaneity as one of its modes, as evident in the Analogies, or gesturing to the need for the analogy of the line, as in the initial discussion of time in the Aesthetic and its elaboration in the Deduction (even in the ‘amplification’ of time in the A-Deduction he still uses the image of the line). The argument of the refutation of idealism relies upon this necessary co-implication, but as such it is the most explicit statement of its necessity. Elsewhere, such as in the Analogies of Experience, this co-implication tends to be articulated in terms of simultaneity rather than spatiality, but as the elaborations of the argument of the refutation in the *Reflexionen* show, such simultaneity is explicitly spatial. The identification of this co-implication of time and space in Kant has consequences for the philosophies that follow after him and which emphasize time, such as Meillassoux’s, as part of what Ed Casey calls the “era of temporocentrism” (1998, x; see §1.7 above). Thus, the analysis of Kant presented here not only rectifies the overtly temporal interpretation and legacy of Kant, but it also shows that in many ways this ‘era of temporocentrism’ was mistaken from the start, and that the contemporary ‘spatial turn’ must include a return to Kant to address the importance of space alongside time in his thought. These more general issues are addressed in more detail in the following Conclusion (Chapter 6 below). But before turning to them, there is a final pertinent consequence of the analysis of Kant’s spatial engagement with the real through his treatment of Newtonian physics that must be addressed. This is the charge put forward by Meillassoux (and Guyer and Russell) that Kant’s ‘Copernican revolution’ is in fact a ‘Ptolemaic counter-revolution.’

§5.8.3. Orientation in Outer Space: Real and apparent motion, the Copernican and the Ptolemaic

The present Chapter has argued that space provides the locus of Kant's engagement with the real. Most concretely, this is in terms of the empirical experience of the external world through outer sense. But the possibility of this outer sensation depends upon an awareness of space as absolute or empty, or as the 'intuition of space itself,' or 'cosmological apperception' or 'being in the world,' and, as argued in the *Metaphysical Foundations*, this ultimately is a transcendental idea that is constructed via the method of Book III of Newton's *Principia*. This method is the 'groping' outwards via the laws of motion and the theory of universal gravitation (as a simultaneous dynamical community) to determine first the places and relative movements of the solar system with its planets orbiting the sun, but then eventually towards the stars themselves (even the so-called 'fixed stars' that are nonetheless actually in motion) and their movements and rotations in search of the fixed mass center of the universe against which the absolute motion of everything can be oriented and determined, and thus absolute space, as the condition that made this process possible in the first place, is fully conceived. As Kant argues in many places, even right back in the *Directions in Space* essay, absolute space itself is not an object of experience, and consequently absolute motion, and real motion, cannot be directly experienced, all motion appears and is experienced as relative. It is through the constant orientation via the fundamental directionality of space that absolute space is constructed as a transcendental idea and the possibility of the legitimacy and reality of outer sensation guaranteed.

The distinction between true and apparent motion and its application and role within astronomy in determining the movements and relations of the bodies of the solar system also applies to Kant's characterization of his own transcendental method through the metaphor of the Copernican revolution, and to the criticism put forward by Meillassoux (and Guyer and Russell) that this is in fact a 'Ptolemaic counter-revolution' (see §§2.1.2-2.1.3 above). The debate, or difference, between the Ptolemaic and Copernican systems is precisely about the distinction between real and apparent motion. The advance made by Copernicus (and Kepler and Newton after him) was to distinguish between the two and determine the real motion of the planets in relation to each other from the apparent motion observed from his earthbound position of observation; whereas in the Ptolemaic system there is no distinction between the real and apparent motion of the heavenly bodies: the sun appears to revolve around the

Earth because it actually does revolve around the Earth (not because the Earth turns). Kant's 'Copernican revolution' of transcendental idealism also introduces a distinction between appearance and the things in themselves,⁸⁸ but whereas Copernicus explains how the reality of the celestial movements produces the apparent motion perceived by the earthbound astronomer, thus showing that there is in fact no difference between real and apparent motion, Kant—and this is the line of the argument put forward by Meillassoux—completely separates the two and confines the knower to only ever knowing appearances, which are always in a correlation to the subject. Although he does not discuss this issue in terms of appearances and things in themselves or the real and apparent motion of the celestial bodies as described here, it is the placing of the subject as the unmoving center of all appearances and the restriction of 'reality' (empirical reality) to those appearances that for Meillassoux constitutes Kant's 'Ptolemaic counter-revolution' (2008a, 118; see §2.1.3 above).

The argument presented through the discussion of Kant's refutation of idealism and the emphasis that he places on space as outer sense, is that, contra Meillassoux, Kant at least recognizes and engages with the reality (and not merely the empirical reality) of the external world, and that this engagement occurs in terms of the issue of orientation in absolute space as a transcendental idea. Furthermore, in the fourth chapter of the *Metaphysical Foundations*, Kant explicitly addresses the distinction between real and apparent motion, or between absolute and relative motion/space, in terms of providing the conditions of possibility for experience via Newton's attempt to discern absolute space in Book III of the *Principia*. The Newtonian method commences purely from appearances and the careful observation of apparent motions from the position of the earthbound astronomer: the movement of the sun and the stars, of the other planets in the solar system and the perturbations of their moons. Through the application of the

⁸⁸ Kant's comparison between his transcendental method and the Copernican revolution comes from his shift from the assumption that cognition must conform to objects, to questioning "whether we do not get further with the problems of metaphysics by assuming that the objects must conform to our cognition," which he says is "like the first thoughts of Copernicus, who, when he did not make good progress in the explication of the celestial motions if he assumed that the entire celestial host revolves around the observer, tried to see if he might not have greater success if he made the observer revolve and the stars at rest" (Bxvi). Note that the Copernican metaphor only comes with the B-Edition of the *Critique* in 1787, i.e., after the careful consideration of Newton and the distinction of real and apparent motion in the *Metaphysical Foundations* of 1786.

laws of motion and the law of gravitation these apparent motions are transformed into the model of the relative motions of the planets of the solar system, orbiting around its mass center somewhere close to the center of the sun and all participating in reciprocal interactions through the dynamical community of universal gravitation. The Newtonian model goes further than the Copernican one, for it is not just a heliocentric model, but rather a recognition that even the sun moves and the ‘fixed point’ that anchors and orients the solar system is instead its mass center. Kant goes even further than Newton, for he extends the system of motion beyond the solar system to assert that everything is in motion, and that instead of finding a fixed point that can be used to orient and determine the real motions of the celestial bodies in absolute space, there is only an ever-expanding progression of more and more relative motions that only ‘gropes’ for that fixed point and the absolute space that it would determine. This is why absolute space is an idea, but as an idea it still has a reality, and makes an engagement with reality possible. The ‘groping’ in space through apparent and relative motion is the process of orientation that is Kant’s engagement with reality. Real motion and absolute space may be ideas, but that does not mean that more and more relative movements cannot be discerned from their apparent motions and oriented in their relation to one another in such a way that they approach absolute space. It is this process and possibility of orientation that proceeds towards absolute space and is only made possible on the presupposition of absolute space that is Kant’s engagement with the real external world. This orientation extends all the way from that of the person in a dark room to that of the person on the surface of Earth, of the Earth in the solar system, of the solar system in the Milky Way, of the stars in the immeasurable darkness of outer space, that is to the “starry heavens above” that stand in for all of nature in the Second *Critique* and which, according to Kant, “fill the mind with ever new and increasing admiration and reverence” (5: 161).

Contrary to Meillassoux’s assertions, Kant is very much concerned with the possibility of engaging with the external world, but he is also acutely concerned with the limitations of doing so, and indeed doing so as a limitation. This limitation is not a regression into a metaphorically Ptolemaic centeredness on the subject, but instead, through a connection to Kant’s literal consideration of the spatial structures and model of the cosmos and the possibilities of real and apparent motion and absolute and relative space, reveals a system that is in fact more ‘Copernican’ than Copernicus,

where the Earth (metaphorically the subject/knower) is not just decentered, but the possibility of the center itself is called into question. This questioning of the center and the difference between true and apparent motion is the problem and process of orientation, not just in thinking as a guard against the illusions of speculative reason, but quite literally in the external space of the real world, in what Meillassoux, in his own spatial metaphor, calls the ‘great outdoors.’

Chapter 6. Conclusion

§6.1. Summary of the Argument of the Thesis

The specific conclusions of the previous Chapter—the co-implication of time and space via the issue of the determination of time in inner sense, the possibility of orientation within the idea of absolute space, and Kant’s engagement with the real through these issues—now complete and fulfil the aims of the thesis set out in the Introduction. The co-implication of time *and* space asserts the centrality of space alongside time in Kant’s Critical system and his transcendental idealism; this was the first aim of the thesis. Furthermore, analysis of this centrality of space shows that it is through the issue of space as the form of outer sense that Kant engages with the problem of the reality of the external world. The problem of the reality of the external world connects to the second aim of the thesis: the explication of Kant via the interpretations and criticisms of his philosophical system put forward by Quentin Meillassoux under the charge of ‘correlationism.’

Meillassoux’s analysis of Kant outlines the nexus of issues through which this thesis interprets Kant. Firstly, in terms of the criticism of Kant as a ‘correlationist’ and the exhortation for contemporary philosophy to ‘abandon the transcendental,’ Meillassoux both underscores the importance and influence of Kant within philosophy and aims to challenge that influence. The only way to decide if that criticism is ultimately justified or if the exhortation should be followed is through a close interpretation of Kant, and it is in terms of that necessity that this thesis progresses. Secondly, Meillassoux’s analysis provides the outlines for this interpretation of Kant. His structure of the genealogy of the ‘Kant event,’ which passes through first the ‘Copernico-Galilean event’ and the ‘Hume event,’ corresponds to the ‘canonical distinction’ between dogmatism, skepticism and Criticism with which Kant divided the history of philosophy and through which his own philosophy also progressed as it developed. This division, of both the history and structure of philosophy and also of the development of Kant’s thought, structures this thesis. Kant’s confrontation with dogmatism in terms of the status and nature of the principle of sufficient reason and the division of the faculties of sensibility and understanding that he

developed in response to this analysis, are addressed in Chapter 2; Chapter 3 turns to Kant's confrontation with Hume, the problem of induction and Kant's eventual Critical reconfiguration of the principle of sufficient reason in terms of time-determination; and finally Chapters 4 and 5 are devoted to the details of Kant's Critical system of transcendental idealism and especially the roles and relation of time and space in that system.

The specific focus of these final two Chapters on time and space is a result of the third way in which Meillassoux's thought structures the interpretation of Kant put forward in this thesis. Just as Chapter 3 concerns Kant's use of Hume's insights about the problem of induction to reconfigure the principle of sufficient reason in terms of time-determination, it also addresses the parallels in Meillassoux's system of 'speculative materialism,' as he also uses Hume's problem as a speculative opportunity to reconfigure the principle of sufficient reason in terms of time into what he calls the 'principle of factiality.' Within Meillassoux's temporal reconfiguration, however, is a tension in the temporalities that he presents; what Peter Gratton succinctly calls a "heterogeneous relation" between irrational 'hyper-chaos' which is an eternal instant, and the chronology, or 'dia-chronicity,' of 'ancestrality' and the time of science, which Meillassoux uses to problematize 'correlationism.' At issue in the 'heterogeneous relation' between these two forms of time is precisely the problem of time-determination, or how the movement and flux of time can be ordered into the relation of before and after through which time is experienced and known. Time-determination is, of course, the way in which Kant also reconfigures the principle of sufficient reason, but some of the issues involved in Kant's reconfiguration are also found in the problems and tensions of Meillassoux's treatment of time and through the use of spatial metaphors. Most directly, Meillassoux uses spatial metaphors, in the form of a straight line, to represent the order of chronological time. Additionally, he also employs the spatial metaphor of the 'great outdoors' to describe the reality of the world independent of human knowledge. The analysis of these two spatial metaphors pre-empt the conclusions that are eventually drawn about the role of space in Kant's thought that is explicated in Chapter 5.

Chapter 5 examines the role of space in Kant's thought in terms of its relation to the issue of time-determination with which he reformulated the principle of sufficient reason.

Ultimately, Kant argues that space is necessary for time-determination as only the existence of something persistent in space beyond the knowing subject is capable of providing the abiding framework within and against which time can be determined in its three modes of persistence, succession and simultaneity. This is the argument that Kant puts forward in the Refutation of Idealism that he added to the B-Edition of the *Critique* in 1787 and continues to work with in the *Reflexionen* after 1787. The Refutation asserts the necessity of the co-implication of time and space, but it does so in building upon and completing an argument about time-determination that is set out earlier in the *Critique* and which is concerned with the legitimacy of objective knowledge or cognition in terms of the synthesis of sensibility and understanding. The close analysis of the *Critique* in Chapter 5, however, also revealed how Kant's thinking changed and developed between its two Editions. These changes were primarily concerned with the problematic status of inner sense and time and the role they play within the Critical philosophy. The 1781 A-Edition of the *Critique*, it was argued above, presents an 'amplified' account of inner sense, which develops from a recognition of the central role of time and time-determination in the synthesis of sensibility and understanding and the principle of sufficient reason. In the A-Edition, Kant initially 'amplifies' the ability of inner sense to a faculty capable of determining time through its own spontaneity alone. This 'amplification' of inner sense, however, left Kant open to the charge of intellectual intuition and thus idealism, and in the B-Edition of the *Critique* he retreats from the account of inner sense given in the A-Edition and develops an 'alternative strategy' for the Deduction, which relies upon the determination of time through a more limited account of empirical inner sense. It is this 'alternative strategy' that is eventually completed in the Refutation of Idealism with its explication of the necessity of persistent things external to the knowing subject and thus the co-implication of time and space in time-determination. This analysis of the *Critique* and the interrelations of time and space across its two Editions reveals two things: firstly, how it is possible that Kant is construed as a purely temporal thinker, and his legacy and philosophical influence is purely temporal. This is a result of prioritizing the A-Edition of the *Critique*, or even of pursuing its 'amplification'

of inner sense in terms of transcendental apperception throughout the B-Edition as well.¹ However, with this overly temporal interpretation comes the problem of the threat of idealism that Kant diagnosed in the B-Edition. This analysis now clarifies how Meillassoux's criticism of Kant as a 'correlationist' and thus a hidden idealist is based primarily upon the A-Edition, and how Malabou, by rethinking time in terms of epigenesis (a development in the B-Edition nonetheless), can move, with Kant, beyond Meillassoux's criticism. Meillassoux even goes so far as to explicitly discount the Refutation of Idealism as part of his strategy to interpret Kant in terms of 'correlationism' instead of idealism. The analysis presented in this thesis, however, shows the importance of the Refutation in terms of the issue of time-determination and the interrelation, and eventually co-implication, of time and space, which are issues and problems that are also relevant to Meillassoux's interpretation of Kant and his own positive system of 'speculative materialism,' even if they are not always recognized as such. Thus the Refutation of Idealism, and the 'alternative strategy' of the B-Edition *should* be of concern to Meillassoux and his refusal to engage with them now appears as part of a systematic misinterpretation. Within the confines of that systematic misinterpretation and its emphasis on the A-Edition, Meillassoux is nonetheless correct in some of his criticisms. Notably, the way in which Kant, in the A-Edition Fourth Paralogism performs an 'ontological reduction' of the meaning of the phrase 'outside us' so that its exteriority is tied—its 'radical exteriority' is 'correlated' in Meillassoux terminology—to the internal knowledge of the subject.² Recognizing this 'reduction' of space in the A-Edition highlights the change in the B-Edition, which does not explicitly renounce such a 'reduction,' but in removing its explicit assertion reinstates an equivocation in the phrase 'outside us' so that it can be taken to refer to the existence of the world beyond and separate to the subject as well as the 'reduced' meaning of the experience of things in space.

¹ This is a path explicitly followed by Heidegger (1985, 1997) who prioritizes the A-Edition over the B, and, via Heidegger, by Catherine Malabou (2016) despite her focus on §27 of the B-Deduction (see §6.2.2.1 below).

² Meillassoux, however, does not explicitly reference the Fourth Paralogism or Kant's discussion of the equivocation in the phrase 'outside us' and the A-Edition's 'reduction' of such 'outsides.'

This is the second implication to be taken from the analysis of the changes between the two Editions of the *Critique*: that even in terms of the developments of the issue of time-determination and the interrelation, and eventual co-implication, of time and space, the B-Edition nonetheless has implications for the debate between idealism and realism that are pertinent to Meillassoux's concerns. If the ambiguity in the phrase 'outside us' is restored and maintained in the argument for the co-implication and thus centrality of space alongside time in B-Edition, then Kant opens up the possibility of an engagement with the reality of the external world through a discussion of space. Chapter 5 argues that Kant presents and examines such a possibility in the developments of the argument of the refutation of idealism in the *Reflexionen* that followed the B-Edition and in texts that deal directly with the issue of space. Some of these texts actually pre-date the Critical philosophy, but this shows that they have a direct role in its development, once again reasserting the importance of space within Kant's philosophy.

This engagement with the real through the issue of space in Kant is structured around two things: firstly, absolute space as a constitutive idea akin to the regulative transcendental ideas of the *Critique*; and secondly, the directionality of space and the possibility of orientation as the condition of outer sense (an argument addressed in Chapter 4 above). The orientation of directional space within the idea of absolute space is not only the condition of possibility of the outer sense through which any subject engages with the real world, it also operates right up to the level of the determination of the movements of the cosmos and the differentiation and relation between its real and apparent motions. By bringing together this analysis of the movements of the cosmos and Kant's engagement with the real through the issue of space (and its role in time-determination) Chapter 5 concluded that rather than being a 'Ptolemaic counter-revolution' against the insights of the scientific 'Copernico-Galilean event' as Meillassoux asserts, Kant's thought is in fact, literally (in terms of the planets) and metaphorically (in terms of the relationship between knower and the world), more Copernican than Copernicus.

§6.2. The Importance and Wider Implications of these Arguments

The arguments presented in this thesis have important implications for three areas. Firstly and most obviously, they are pertinent to contemporary interpretations of Kant, both those that follow the criticisms and philosophical movement presented by Meillassoux and also more general treatments of Kant. Secondly, the assertion of the co-implication of time and space in Kant's thought has consequences for understanding the philosophies of time and space that have followed after Kant, and also the roles and treatments of time and space in the history of philosophy in general. Third and finally, in terms of the debate that Meillassoux reinvigorates, this interpretation of Kant and the roles of time and space in his thought has implications for the issue of realism and especially its relation to the empirical sciences. As these three areas are central to philosophy, both in terms of its history and its contemporary practice and ongoing debates, these implications show the importance of engaging with Meillassoux and the questions about Kant that his interpretation prompts, even if the arguments of the present thesis undercut Meillassoux's position and reveal shortcomings in his interpretation of Kant.

§6.2.1. The Implications and Interpretations of Meillassoux and Kant

In the Introduction, above, it was stated that the aim of this thesis is not to endorse or condemn Meillassoux's arguments concerning 'correlationism' just as it is not to defend or reject Kant's system of transcendental idealism, instead, this thesis uses the interpretation of Kant presented by Meillassoux in *After Finitude* to examine the roles of time and space in Kant. However, the detailed engagement with Kant throughout the thesis undoubtedly complicates and thus somewhat undercuts Meillassoux's interpretation of Kant, so much so that it cannot but have implications for Meillassoux's thought as a whole. Investigating these repercussions in turn reveals the implications of Meillassoux's thought for interpretations of Kant and for wider philosophical questions of time and space, and realism and idealism.

The method of the present thesis has been to use Meillassoux's interpretation of Kant as a starting point for a more detailed engagement with Kant, and the result of this was to show the discrepancies and limitations of Meillassoux's interpretation. Thus it has argued that

Meillassoux's identification of the importance of the rejection of the principle of sufficient reason for Kant is in principle correct, but the details of the connection he makes to the ontological argument and his placement of this rejection in the 1781 *Critique of Pure Reason* are erroneous. Kant in fact began his problematization of the principle of sufficient reason much earlier in the *New Elucidation* (1755) and equally formulated his criticism of the ontological argument in the *Only Possible Proof for the Existence of God* (1766). Similarly, Meillassoux is right in recognizing the influence of Hume's problem of induction for Kant, but he disregards the role of the Antinomies and once again misplaces Kant's main engagement with Hume by focusing on the Transcendental Deduction and neglecting the arguments of the Second Analogy of Experience. Thus the main implication of this thesis for Meillassoux's work is the undercutting of his criticism of Kant. Nowhere is this more evident than in the retrieval of the importance of the Refutation of Idealism in Chapter 5 above, which Meillassoux knowingly and deliberately declines to engage with as part of an overarching, yet unacknowledged, tendency to interpret Kant entirely through the A-Edition of the *Critique*.³ All of this constitutes what was referred to above in §5.8.2 as Meillassoux's 'systematic misinterpretation' of Kant.

The implication of the recognition of this systematic misinterpretation for Meillassoux is that if his diagnosis of 'correlationism' and the exhortation to 'abandon the transcendental' in the form inherited from Kant are to be endorsed or followed, then there must be a re-engagement with Kant and a re-assessment of his arguments and influence in light of the details and clarifications presented in this thesis. As Meillassoux's interpretation of Kant forms the basis of the development in philosophy known as 'speculative realism,' and indeed is the single uniting feature of what is now a disparate set of thinkers, the role and relation of this entire trend of thinking to Kant must also be readdressed. Such a reengagement with Kant does not necessarily need to take place in either terms of Meillassoux's polemical antipathy towards Kant, nor as a reassertion of some dogmatically Kantian orthodoxy. For just as Meillassoux 'systematically misinterprets' Kant he nonetheless in his analysis of 'correlationism' does recognize

³ Meillassoux's explicit sidestepping of the Refutation of Idealism was discussed in §2.1.1 above, also see Meillassoux 2007, 408 for his explicit statement on the matter.

something important in Kant, that legitimate objective knowledge in the Kantian sense *is* a correlation between subject and object.⁴ What the misinterpretation misses, is how for Kant this is not an exhaustive account of all possible cognition. As Kant explicitly states in the B-Introduction, he has to “deny **knowledge** in order to make room for **faith**” (Bxxx), thus opening up the possibility of other sorts of engagements with the world that are not only in terms of, or within the bounds of objective knowledge of the things of the world.⁵ The proof for the existence of the external world is not objective in this sense, it is not a direct knowledge of the world as a thing, but rather of the existence of things in space is a necessary condition of any objective (correlated) experience of those things. The impact that Meillassoux had within contemporary philosophy and the enthusiasm for his criticism of Kant (see §1.1 above) is in part attributable to the fact that despite its shortcomings the criticism of ‘correlationism’ nonetheless recognized something important in Kant and set out a position—extending the limited legitimacy of the correlation to a totalized *correlationism*—that Kantian thought must avoid. This thesis has argued that Kant does in fact avoid it

The clarification of the boundaries of correlated knowledge and Kant’s realism is not the only outcome of the reassessment prompted by Meillassoux. Two of the misinterpretations of Kant identified above, namely the misplacements of Kant’s arguments concerning the principle of sufficient reason and Hume’s problem, are not fatal to Meillassoux’s overarching argument about Kant, ‘correlationism’ and realism as they are primarily concerned about the development of Kant’s thought rather than the specific system of

⁴ The aim of the present thesis was never merely to prove that ‘correlationism’ is “the dogma that never was,” to use David Golumbia’s phrase (2016). Despite its more antagonistic and less generous aim, Golumbia’s analysis of Meillassoux is nonetheless insightful. In addition to pointing out the shortcomings of Meillassoux’s interpretation of Kant and neglect of the numerous secondary sources that present an explicitly realist interpretation of Kant (notably Guyer (1987), Langton (1998) and Westphal (2004)), he also criticizes Meillassoux’s interpretation of Wittgenstein as ‘correlationist’ and addresses how Meillassoux does not consider or reference developments in contemporary analytic philosophy, such as mathematical Platonism, that are relevant to his realist project.

⁵ Although it has not been examined in the present thesis, this statement from the B-Introduction also shows how the issue of space opens up onto the domain of faith and the practical and moral aspects of Kant’s philosophy.

transcendental idealism. What they do reveal, however, is the important role that time-determination plays in Kant's thought; and in turn, this reveals an unexpected parallel with the role of time in Meillassoux's thought. Thus, the clarification of Kant's thinking, prompted via the misinterpretation put forward by Meillassoux also emphasizes something about Meillassoux's system that he himself does not accentuate, namely, that his philosophical system of 'speculative materialism' is ultimately a philosophy of time.

Interpreting Meillassoux as a philosopher of time, rather than exclusively in terms of either his criticism of Kant or his commitment to realism, in turn opens another way of engaging with his philosophy and reveals some problematic inconsistencies in the system he puts forward. Notably, these inconsistencies—between the two 'heterogeneous' forms of time he proposes—are related to and must be resolved through the question of the possibility of the determination of time, i.e., precisely the issue Kant grapples with in his own reconfiguration of the principle of sufficient reason. Interrogating Meillassoux's philosophy in terms of time and the problem of time-determination also reveals the way in which the issue of space, in the form of his use of the spatial metaphor, is a disruptive and problematic element within his system, an issue which must be resolved and clarified if his position is to be developed and defended. Ultimately, the present thesis traces this issue of space back into its interpretation of Kant in order to address the third element of Meillassoux's misinterpretation of Kant: the importance of the Refutation of Idealism added to the B-Edition of the *Critique*. Thus, the engagement with Meillassoux also has implications for understanding how the roles and relations of time/space and realism/idealism operate in the development of Kant's philosophy. Positioning Meillassoux as a thinker of time, and especially in relation to the connection between Kant and the philosophy of time (see 1.7 above), also means that he must be situated with the history of the philosophy of time, and within the history of philosophy as one of temporality.

§6.2.2. *Philosophies of Time and Space*

Considering Meillassoux as a philosopher of time not only exposes the parallels between his thought and that of Kant, it also presents a new set of structures through which to interpret his philosophy and its place in the history of philosophy. The first issue to arise is the question of how his philosophy of time fits within the distinction between the ‘time of the universe’ and the ‘time of our lives’ that David Hoy uses to define the fundamental issue of the philosophy of time (2009, xi; see §1.7 above). Although Meillassoux also presents two forms of time—‘hyper-chaos’ and chronology—they do not neatly connect to the general forms presented by Hoy. Primarily, this is because Meillassoux argues that both ‘hyper-chaos’ and the scientific ‘dia-chronicity’ of chronology describe the reality of the ‘time of the universe.’ Furthermore, even if an attempt were made to force an alignment between the two sets of forms, then Meillassoux would appear to be in direct opposition to the usually established understanding of the dichotomy between the ‘time of the universe’ and the ‘time of our lives.’ This is because what Meillassoux undoubtedly asserts as the ultimate reality, and explicitly as a temporal reality, is ‘hyper-chaos,’ which contains at least the possibilities of radical change, or stasis, rather than a determined and necessary progression, the latter being a feature that he attributes to the more epistemic—insofar as it is ‘known’ scientifically—*notion of chronology*. The reversal revealed here, through the attempt to consider Meillassoux’s philosophy of time in terms of the wider debate, is in line with his reversal of Hume’s skeptical rejection of the principle of sufficient reason. Just as Meillassoux reverses Hume’s insight into the lack of necessity in empirical experience to instead argue that Hume in fact reveals the lack of necessity in the world, he also reverses what seems like the attribute of the ‘time of our lives,’ i.e., inconstancy or flux, to assert that it is in fact what would be called the ‘time of the universe,’ i.e., ‘hyper-chaos.’ Recognizing this reversal, however, only reasserts how Meillassoux preferences the ‘time of the universe’ in that he is concerned primarily with reality. He thus never actually addresses what is referred to as the ‘time of our lives’ except to claim that it is to be dismissed or ‘abandoned’ along with ‘correlationism.’ To a degree, this *is* an answer to the problem of the aporia of time and the discrepancy between the ‘time of our lives’ and the ‘time of the universe,’ insofar as it simply eliminates the former. However, it is this elimination of the aporia and the preference for reality that accounts for why Meillassoux never addresses the problem of the determination of time

that is emphasized in the heterogeneity between the two forms of time he does present. In ‘abandoning’ Kant he also abandons, without ever addressing, the ‘transcendental solution’ to the aporia of time that Kant presents in terms of his theory of time-determination.

Time-determination nonetheless remains a problem for Meillassoux precisely because it is the possibility of such determination that separates chronology from ‘hyper-chaos.’ His avoidance of this issue, along with his ‘abandonment’ of Kant also places him in a problematic relation to the construal of the ‘temporocentrism’ of philosophy since Kant (see §1.7 above for Edward Casey’s diagnosis of philosophy as ‘temporocentric’). On the one hand, Meillassoux’s concern with time means that he is another example or development of the ‘temporocentrism’ of philosophy, and especially of continental philosophy (see §1.7 above, footnote 10); but, on the other hand, because he rejects both the aporia that structures the philosophy of time and the Kantian solution that has been the form of the dominant solution to that aporia, which are also defining features of continental philosophy, Meillassoux must be considered as an alternative to the form of time that makes up the ‘temporocentrism’ of philosophy, thus replacing one ‘temporocentrism’ with another.

Just as the aim of this thesis was not to directly endorse or reject either Kant’s position or Meillassoux’s criticism of him, it does not aim to endorse one philosophy of time over another. Instead, in the way that Meillassoux’s interpretation of Kant was used as a starting point to develop another interpretation, so too can the arguments of this thesis be used to problematize the ‘temporocentric’ interpretation of Kant and of philosophy since Kant, and instead show that Kant’s legacy and influence should include the co-implication of time and space from the start. Thus it was not ‘temporocentric’ in the first place, prompting the necessity of rethinking the roles and relations of time and space within the history of philosophy, especially since Kant. This rethinking can be approached from the two sides of the co-implication: in the first case, from the side of time, the analysis of Kant that emphasizes the co-implication of time and space can be used to show how within every temporal philosophy that builds upon Kant there is always a residual presence and disruption of space that precludes and problematizes any asserted primacy of time. In the second case, Kant also now must be considered as a philosopher of space and

the consequences of the particularities of his spatial arguments must be recontextualized in terms of those thinkers who have emphasized and examined space and place. Furthermore, the stakes and consequences of thinking of Kant as a spatial thinker must also be considered, and in particular how it is in terms of space that Kant engages with the real, which also has consequences for debates about realism.

§6.2.2.1. Time

Instead of attempting to cover the entirety of post-Kantian thought this section is restricted to two examples of how explicitly ‘temporocentric’ interpretations of Kant also contain spatial elements. These two examples are: Firstly, Catherine Malabou’s recent book *Before Tomorrow: Epigenesis and Rationality* (2016), which is selected because it uses Meillassoux’s criticism of Kant to develop and re-emphasize a strong ‘temporocentric’ interpretation of Kant and thus parallels the concerns of the present thesis and is relevant to the contemporary debate in philosophy about the place and legitimacy of Kant’s legacy (see §1.1 above). And secondly, the work of Martin Heidegger, selected because, as Malabou identifies, his *Being and Time* (1927)—and the connected interpretation of Kant in the *Kantbuch* (1929)—is often considered the high point of temporal philosophy after which the question of time ‘vanished’ and “lost its status as the leading question of philosophy” (Malabou 2016, 1). Heidegger is thus a central moment or figure in the development of the ‘temporocentric’ interpretation and legacy of Kant.⁶ Despite their explicitly temporal interpretations of Kant, and the temporal philosophies that they develop in response, both Malabou and Heidegger also contain a trace of the importance of space, either somewhat implicitly in the case of Malabou, or explicitly in the way in

⁶ Meillassoux also identified Heidegger as the apex of ‘correlationism (see 2.1.1 footnote 1, above). There is thus a parallel between the interpretations of Heidegger as a thinker of time and Heidegger as a ‘correlationist,’ which becomes especially clear when both tendencies are understood as connected to his interpretation of Kant and his position as a development of Kantian thought. The analysis of Heidegger presented here in terms of his interpretation of Kant with regard to his own thinking on time and space, thus presents a potential starting point or conceptual rubric for an engagement with Meillassoux’s charge of ‘correlationism.’

which Heidegger's thought developed after his abandonment of the project of *Being and Time*. Thus, these brief concluding analyses both show how the conclusions of the present thesis—the co-implication of time and space and the importance of space in Kant—are applicable to contemporary and significant philosophical issues and thus important for both the interpretation of the history of philosophy (as in the case of Heidegger) and the development of new concepts and arguments (such as those of Malabou).

In *Before Tomorrow*, Malabou structures her argument around three 'questions': The first is that of time as a central issue within philosophy, which she traces to Heidegger; the second is of the relation between reason and the brain, which connects with her interest in neurobiology and the plasticity of the brain; and the third is that of the status and legacy of Kant, especially as it is called into question by Meillassoux. The argument that Malabou presents is to draw together these three questions by using Kant's evocation of a "system of the epigenesis of pure reason" in §27 of the *Critique of Pure Reason* (B167), and the question it raises about the origin, development and end of reason (or the *a priori* or 'the transcendental'), to "discover ... a new dimension of time" that includes "an unexpected anticipation of brain epigenesis, and another logic of foundation" (19). This 'new dimension of time' developed through considerations gleaned from neurobiology, thus confronts Meillassoux's challenge of the possibility of the 'abandonment' of 'the transcendental' and the Kantian legacy and it also re-invigorates the centrality of time within philosophy i.e., its 'temporocentrism.'

The new "epigenetic thinking of time" (2016, 140) that Malabou develops from Kant is a fundamental rethinking of time in terms of an "originary co-implication of *a priori* and *a posteriori*, before and after" (153, see also 135), which combines the two causalities of mechanism (in the First *Critique*) and teleology (in the Third), and also bridges between the 'ancestral' anterior time of Meillassoux—and the issue the 'ancestral' raises of the problem of the emergence of 'the transcendental' (see §3.3.1 above), which is now solved through a rethinking of genesis in terms of epigenesis—with the 'primordial' or 'messianic' and 'to come' time of continental philosophy (140).⁷ This argument is

⁷ As part of this rethinking of time through the issue of the 'epigenesis of pure reason,' which explains the origin and development of reason, Malabou also develops an argument for what she

developed through an investigation of the doctrine of epigenesis evoked by Kant in §27 of the First *Critique*, and in terms of the debate between preformationism and epigenesis that took place in eighteenth-century Germany and also contemporary developments in the study of epigenetics and neurobiology.

The hidden spatial element that develops hidden within this new account of time is most evident in Malabou's discussion of the relation between epigenesis and genesis and the meaning of the prefix 'epi-' through the use of the analogy of the epicenter of an earthquake. The epicenter is the point on the surface of the Earth that corresponds to the subterranean hypocenter where the earthquake actually occurs (35). The importance of epigenesis, as opposed to genesis and the question of origin, is then, as Malabou argues, "to understand how a surface can be foundational" (37). The importance of the surface in this analogy between the epicenter of an earthquake and epigenesis, is expanded in the discussion of the difference between the theory of epigenesis as it existed in Kant's time and the contemporary science of epigenetics, which is concerned not with the underlying genetic code of DNA but rather focuses and works "on the 'surface' (*epi*) of the molecule" (79) and is concerned with how the genetic code of DNA is transcribed and how cells develop in relation to the environment in which that development takes place. In terms of the 'epigenesis of pure reason,' then, the important question is not only one of the origin, development and end of reason but also of the surface of reason and thus of the

variously calls an "adaptive view of the transcendental," "a categorical modifiability" and "the modifiable – and modified – form of the transcendental" (180). This is similar to the notion of the 'relativized *a priori*' argued for by Michael Friedman to explain, and indeed make possible, the development of science and scientific models (2001, *passim*, see Part Two section one in particular). Friedman is especially concerned with the shift from the Newton's laws of motion, which correspond to Kant's account of the *a priori* form of time and space, to the model of general relativity, which presents other, non-Euclidean geometries that contravenes and disproves Kant's account of the apodictic nature of space (see §6.2.3 below for a brief discussion of this issue). Friedman does not present an overarching account of the time within which science changes, just as somewhat inversely, Malabou does not present an account of the specific or identifiable changes, or epigenesis and development, of reason; similarly, the *a priori* structures that Malabou focuses on are the categories of the understanding, while Friedman is more concerned with space, time and motion and their role as a sensible *a priori*. But these differences are not necessarily incompatible and in fact, may in some ways be complementary.

topography of reason—the spatiality of reason as well as its temporality.⁸ Malabou evokes this spatial issue of the topography of reason in various ways: in addition to emphasizing how epigenesis and epigenetics postulate “the transcendental as a ‘surface structure’” (157), she also asserts that “epigenesis marks the current valency of the meeting point between the old and the new, the *space* where they reciprocally interfere” (158 italics added), or “requires that we seek out and show this *place* [of ‘the transcendental’]” (159 italics added), she also describes how the epigenetic thinking of time accounts for how “Natural productivity and ontological productivity meet at the *site* of one and the same moment” (176, italics added). Furthermore, she even references Kant’s own topographical account of reason that he provides in the *Critique of the Power of Judgment*, where he outlines the ‘field,’ ‘territory’ and ‘domain’ of what Malabou explicitly calls the “geography of cognition and thought” through which the movement beyond Kant and the ‘relinquishing (or abandoning) of the transcendental’ called for by Meillassoux is reinterpreted as a “strategy of circumscribing and taking possession of a *space*” (141, italics added, see §4.2 above for a discussion of this division in the Third *Critique*). Thus throughout her attempt to discover and articulate, in terms of the notion of epigenesis, what is explicitly and primarily “a new dimension of *time*” (19, italics added), Malabou continually evokes the spatial; and just as much as she is concerned with the temporal origin, development and end of reason she also identifies the need for a topography of reason that investigates its ‘surface structures,’ or in a much more Kantian idiom, the

⁸ There is also an equivocation between time and space in terms of the question of the task of the Transcendental Deduction, i.e., where Kant raises the issue of the “epigenesis of pure reason” (B167). Malabou focuses on the Deduction as an account of the origin of the categories (20). This treatment of the Deduction is in part motivated by Meillassoux’s challenge of ‘ancestrality’ and the emergence or origin of ‘the transcendental,’ this is explicit in a section of *After Finitude* that is quoted by Malabou, where Meillassoux asserts that Kant is concerned with the categories as a ‘primary fact’ and is not with their “deduction (in the genetic sense)” (Meillassoux 2008a, 38, quoted by Malabou on page 4). In focusing on the issue of the ‘epigenesis of pure reason’ from §27 of the *Critique*, Malabou aims to confront this issue of the ‘genetic’ and thus temporal sense of the Deduction of the categories and the question of their origin and potential development. Dieter Henrich has argued, however, that the sense in which Kant uses the term ‘Deduction’ is in fact a geographical one, in line with a juridical process in Prussia in the Eighteenth Century to determine which laws apply to the place where a crime was committed and thus the task of the Deduction in this sense is explicitly concerned with the topography of reason and the mapping of its legitimate territories, a meaning that is further evident in the numerous geographical metaphors used by Kant in the *Critique* (Henrich 1989, see Chapter 4 above, especially footnote 3).

geography of reason. Thus, Malabou's very recent interpretation and development of Kant, and especially her use of Meillassoux's challenge to Kant, parallels the argument of the present thesis insofar as it emphasizes the continuity between the roles of time in Kant and Meillassoux's thinking. Malabou's own argument—that this must result in a re-emphasis on time—is, however, exemplary of the tendency identified in this thesis to interpret Kant in terms of a 'temporocentric' prioritization of time at the expense of space, which nonetheless also appears as a hidden trace of spatiality within the emphasis on time; just as how in Kant's case, his eventual argument about time-determination relied upon space in the Refutation of Idealism, although Malabou does not address this connection. The result of this parallel and critique of Malabou is not the need to reject her 'temporocentric' account of 'epigenetic time' completely, but rather to recognize the importance of the co-implication of space that is already within that 'new account' of time, and how this relates back to an emphasis on space that was already there in Kant.

The re-assertion of the importance of time and the temporal legacy of Kant in *Before Tomorrow* also provides an insight into how the relation between time and interpretations of Kant has a central position within the continental tradition in general, and in particular the pivotal role of the thought of Martin Heidegger in this nexus of issues. However, just as with her own argument, which in its assertion of a new philosophy of time contained spatial elements, Malabou's insight into the thought of Heidegger also reveals an interpretation of Heidegger that argues that even within the temporal philosophy that he develops through an interpretation of Kant there was already the presence and disruption of the necessity of space. Consequently, just as Malabou aims to reassert the priority of time through a reengagement with Kant, Heidegger and Meillassoux, when her arguments are interpreted in terms of the conclusions of the present thesis they not only lend weight to its argument, i.e., that time and space are co-implicated and that space is central to Kant's thought, but also reinforce the importance of its insights for the tradition of continental philosophy.

Malabou distinguishes Heidegger's *Being and Time* as the apex of the philosophy of time, after which the question 'vanished' (2016, 1), she aims to again 'take up' this question in order to "take it still further" (9). Furthermore, she also identifies the process of this 'vanishing' via Heidegger's interpretation of Kant, where, in the B-Edition of the *Critique*,

Kant supposedly ‘shrinks back’ from the fundamental temporality he uncovered in the A-Edition and retreats into the pure logic of the understanding at the expense of time (7-9, see Heidegger 1997). The re-affirmation of the ‘epigenetic account of time’ in *Before Tomorrow* is thus a retrieval of the ‘future’ of post-Kantian philosophy that was identified and “promised” in Heidegger’s interpretation of Kant and the “bringing to light” once again of the problem of time (140). However, even within Heidegger’s explicitly temporal philosophy there remains a disruption of space that operates along lines similar to those identified in Kant by the present thesis, which has important consequences for his thought, and indeed for the entire tradition of continental philosophy insofar as it is structured around this apex of Heidegger’s philosophy of time, and how that thought can be interpreted today.

In *Being and Time*, Heidegger argues that temporality is “the meaning of the Being of that entity which we call ‘Dasein’” (38: [17]) and furthermore that “The first and only person who has gone any stretch of the way towards investigating the dimension of Temporality ... is Kant” (45: [23]). Consequently, the ‘temporocentrism’ of *Being and Time* is closely connected to Heidegger’s interpretation of Kant. In terms of the focus of the present thesis, Heidegger unequivocally prioritizes time over space in *Being and Time*. In §70, he argues that, “Dasein’s specific spatiality must be grounded in temporality,” a statement that he compares and contrasts with “the priority of time over space in Kant’s sense” (418: [367]). Despite this self-identified affinity between his own thought and that of Kant on time, Heidegger’s interpretation of Kant is slightly more subtle. For while Kant is identified as the first to bring the question of time to light, Heidegger also argues that he ‘shrinks back’ from the importance of this question and fails to even let it become a problem (1985, 45: [23-4]).

In the *Kantbuch*, published two years after *Being and Time* and consisting of much of what was to be Division One of the never-published Part Two of the earlier work, Heidegger expands upon this charge of ‘shrinking back’ to elaborate how it occurs between the two Editions of the *Critique of Pure Reason*. Heidegger’s analysis of this change is similar to that outlined in §§5.2.1-5.2.2 above, which argued that Kant presented an ‘amplified’ account of time and inner sense in the A-Edition of the *Critique* before revising this account and pursuing the ‘alternative strategy’ of the Deduction in the B-

Edition, which eventuated in the spatial arguments of the Refutation of Idealism.

Heidegger, however, sets out this shift in terms of Kant's recognition of 'original time' via the transcendental power of the imagination as the ground-laying of metaphysics, which he then 'shrank back' from in the B-Edition due to the emphasis he placed on the categories and the role of the understanding.⁹

In his early work, such as *Being and Time* and the *Kantbuch* Heidegger unquestionably prioritizes temporality (Casey 1998, 244). However, later in his life, especially after the 'turn' of the 1930s and the abandonment of the project of *Being and Time*, Heidegger himself, in a move similar to Kant's 'shrinking back,' also retreated from his earlier prioritization of time and recognized the importance of space and its co-implication with time. In *Time and Being* from 1962, Heidegger explicitly identifies his own earlier prioritization of time as a misunderstanding, writing that, "The attempt in *Being and Time*, section 70 [quoted above], to derive human spatiality from temporality is untenable" (1972, 23).¹⁰ Similarly, in the *Seminar in Le Thor* from 1969 where he presents an overview of his work, he describes the final step along the way of thinking as the "topology of being" (47: [83]). While Heidegger recognizes the importance of space, or at least the spatiality of place, especially in his later work (see Casey 1998, chapter 11;

⁹ In the *Kantbuch* (1997), see §10 for Heidegger's initial characterization of Kant's priority of time in terms of the Transcendental Aesthetic (34-36: [48-51]), §34 for Heidegger's interpretation of "Time as Pure Self-Affection and the Temporal Character of the Self" (132: [189]), and §35 for Heidegger's account of 'original time' as the root of the possibility of the ground-laying of metaphysics, which Kant identified in the A-Edition but rescinded in the B-Edition of the *Critique* (137-142: [195-203]). Additionally, see §31 for Heidegger's analysis of how Kant "shrank back" from the faculty of the imagination as the 'common stem' of sensibility and understanding (112: [160]) as in the B-Edition he changed his argument as, in Heidegger's analysis, "pure reason as reason drew him increasingly under its spell" (118: [168]). In the account presented in §§5.2.1-5.2.2 above, it is through the imagination that the A-Edition 'amplified' its account of time and inner sense, or, as Heidegger puts it: "time, as a pure intuition, springs forth from the transcendental power of imagination" 121: [173]). In Part Four of the *Kantbuch* Heidegger presents his own "retrieval" of the ground-laying of metaphysics that was revealed by Kant only for him to 'shrink back' from it (143: [204]). Ultimately, this 'retrieved' ground is the philosophy of temporality as fundamental ontology that Heidegger set out at greater length in *Being and Time*.

¹⁰ It is notable that although Malabou recognizes that Heidegger's later thinking in *Time and Being* opens up a co-implicated "time-space" (135, see Heidegger 1972, 14), she does not examine the repudiation of the thinking for time in §70 of *Being and Time* in the later work, or the effect that may have on the thesis of the *Kantbuch*, or in turn on her own account of the importance of the question of time and its relation to space.

Malpas 1999, 2006 & 2012), he never returns at any length to his examination of Kant and the prioritization of temporality that he found in Kant to ascertain if the importance of spatiality is also there in the way that the present thesis argues. Consequently, the arguments of this thesis concerning Kant, the development and changes in his thought between the two Editions of the *Critique* and the co-implication of time and space can also be used to re-interpret Heidegger's 'temporocentric' use and understanding of Kant, and show how the presence of space and its inextricable co-implication with time in Kant's thought ultimately disrupts Heidegger's early temporal philosophy, a disruption that possibly indirectly prompts his own later recognition of the importance of spatiality.¹¹

These brief examinations of Malabou and Heidegger, as two explicitly 'temporocentric' thinkers who construct their arguments upon foundational treatments of Kant and his supposed prioritization of time, show how interpreting such 'temporocentrism' in terms of the conclusions of the present thesis leads to a recognition of the ineliminable and central role of space, via its co-implication with time, within their philosophies and their interpretations of Kant. Malabou and Heidegger were selected as particularly important examples of such 'temporocentric' inheritors of Kant as they represent, firstly, the contemporary currency of these issues (Malabou) and secondly, a certain apex of the issue of time in the recent history of philosophy (Heidegger). This is not to say that they are the *only* 'temporocentric' developments of Kant. Rather, they serve as examples of how such analysis proceeds, and show that such analysis is a contemporary and central concern of, at least, continental philosophy. Furthermore, they are also highly relevant to the concerns of the present thesis as, in the first case, Malabou develops her argument in response to the criticism of Kant put forward by Meillassoux, and in doing so also parallels the present interpretation of the importance of time in Meillassoux's positive philosophy; and in the second, Heidegger is identified by Meillassoux as the apex of the 'correlationist' legacy of

¹¹ In his commentary on it, Hubert Dreyfus calls the discussion of spatiality in *Being and Time*, including its subordination to time, "fundamentally confused" (Dreyfus 1994, 129), and points out that it is symptomatic of "the sort of difficulties that led Heidegger to abandon the project of a fundamental ontology" (133). Similarly, in *Heidegger's Topology*, Jeff Malpas notes that even in Heidegger's early thought "spatiality emerges within the structure of being-there [*Da-sein*] ... [and] disrupts the supposed priority of temporality" (126).

Kant, and thus reinterpreting his thought in terms of the co-implication of time and space, along the lines done so for Kant in the present thesis, will also have consequences for that identification. Most importantly, however, the combination of these arguments, that the identification of the co-implication of time and space in Kant allows this structure to be found in philosophers often considered ‘temporocentric,’ now goes further and calls into question the very idea of the ‘temporocentrism’ of philosophy in general. For it is now argued, that from the very start of that supposed ‘temporocentrism,’ i.e., from Kant’s transcendental solution to the aporia of time, space was already present with and within that thinking of time and remains so even in the most avowedly ‘temporocentric’ inheritances of the transcendental philosophy.

§6.2.2.2. Space

The recognition that a philosophy of space has been implicitly included within the so-called ‘temporocentrism’ of philosophy that follows from Kant also has implications for the philosophy that explicitly focuses on spatiality and space or place as a counter to the supposed preference of time in the history of philosophy. Firstly, the co-implication of time and space reinforces that one cannot simply be preferred or prioritized over the other and that they must always both be considered together. Furthermore, this co-implication is to be found in Kant’s consideration of time itself: the argument of the Refutation of Idealism is the completion of Kant’s theory of time-determination and it unquestionably and unequivocally asserts the necessity of space for time-determination. What is more important, however, is how Kant’s account of space and spatiality in terms of orientation negotiates between the particularities of place and the abstract pure extension of space. Just as Casey identifies a ‘temporocentrism’ in the history of philosophy, he also argues that the specificity of place and its philosophical investigation has often been subordinated to what he calls the ‘supremacy,’ “hegemony” (1998, 201), or more poetically, the “crushing monolith of space in the modern era” (203). This ‘supremacy’ of space takes several forms: firstly, the “uncompromising scientific thinking of Newton,” which Casey describes as “an actual physical universal void” that is “literally

‘absolute’” (200). The second form that Casey identifies is the relativist conception of space such as that of Leibniz that reduces space to distance or identity (200). As the proper names of Newton and Leibniz suggest, the moment of this apotheosis of the ‘supremacy’ of space was also the moment and context in which Kant was developing his Critical philosophy. Casey’s specific aim is to counter this ‘supremacy’ of space and argue for the importance of place. He develops this distinction in part through the limitations of the concept of space:

Space on the modernist conception ends by failing to locate things or events in any sense other than pinpointing positions on a planiform geometric or cartographic grid. Place, on the other hand, situates, and it does so richly and diversely. It locates things in regions whose most complete expression is neither geometric nor cartographic (201).¹²

In Casey’s analysis, Kant occupies a mediatory or equivocal point between space and place. On the one hand, Kant, in addition to his ‘temporocentrism,’ is part of the ‘modern’ assertion of the ‘supremacy’ of absolute space as “absolute and infinite, homogenous and unitary, regular and striated, isotropic and isometric” (193). And yet, on the other hand, Casey also recognizes that “Kant discovered the bond between body and place” (205), which is examined and developed through the discussions of directionality and the incongruence of the left and right hands. Casey argues that there is something of a continuum or interrelation between place and space in Kant’s thought and that this relation is mediated by the directional and orienting body (209). It is in terms of this relation between the specificity of orientation and place and Newtonian absolute space that the arguments of the present thesis are relevant and important.

Of particular importance is the argument, presented in §5.7 above, that absolute space functions in a similar way to the regulative ideas of reason and how it is constructed through the outward progression of orientation from around the body and through the

¹² The distinction and relation between place and space is also examined in Chapters 1 and 2 of Jeff Malpas’s *Place and Experience: A Philosophical Topography*. Like Casey, Malpas is also concerned with developing an account of place that goes beyond merely geometrical and absolute space.

doctrine of the body towards the mass center of the cosmos. The progression here from the oriented body to the absolute space of the cosmos mirrors the series that Casey identifies in Kant that progresses from position to place through body to region and space (209). However, it also clarifies the status of absolute space in Kant. As something akin to a regulative idea, absolute space retains its nature as a ‘crushing monolith’ in terms of the way in which it attempts to appear as transcendent, unconditioned and real or objective, however, just as with those other ‘monoliths’ of dogmatic rationalism addressed in the *Dialectic*, the soul, world and God, it is also revealed as not an actual ‘thing’ in the world but an illusory idea that instead structures how the world can be known and provides a point towards which knowledge can aim even if such knowledge is the infinite and unending task of cosmological orientation. Furthermore, the issue of the orientation of the body is also extended from the orientation of the specific embodied subject to the wider scientific doctrine of the body that includes the motion of the celestial bodies and all matter. Kant captures this extension of the orientation of the body to all the bodies of the cosmos in his term ‘cosmological apperception’ in the *Leningrad Fragment*. It is also seen in Hanna’s development of Kant’s spatial thought in terms of ‘orienting apperception.’ Thus, Kant’s notion of space does not present a dichotomy between absolute space and place; rather, they too are an entwined and co-implicated pair mediated and made possible through the orientation of bodies and yet also necessary for that orientation.

Because the argument of the present thesis both problematizes the supposed ‘temporocentrism’ of Kant by revealing the co-implication of space and time in his thinking and because it also elucidates the way in which Kant thinks through space in terms of both embodied orientation and absolute space, it is important for reassessing both the claims that have been made about the position of Kant in the philosophical history of these concepts, and also for clarifying Kant’s exact arguments about space and orientation. These considerations present a new framework for thinking about the roles and relation between space and place. The most general conclusion is that this thesis underscores the importance of engaging with space and the thinking of space within the history of philosophy, and especially Kantian and post-Kantian philosophy, even if that philosophy has hitherto been construed primarily in terms of time to the detriment or neglect of space. Although the main focus of this thesis has been the account of space in terms of the

physical spatiality of the world or experience, it has also touched upon the underlying spatiality of thought itself in terms of the necessity and implications of spatial metaphors (see Chapter 4 above) and also the spatial nature of the structure of thinking itself in terms of a simultaneous relation of and difference between concepts. While these more general roles of space or spatiality within thinking itself have not been developed at any length in the present thesis, the account of physical space and its importance within Kant and Kantian philosophy, does provide a set of structures and insights into spatiality in general, such as simultaneity, persistence, orientation or the distinction between boundaries and limits, all of which can be used to discuss and elucidate these more subtle roles of spatiality within thought or philosophy.

§6.2.3. Space and Realism

In addition to its primary aim to show the importance of space within Kant's philosophy and the secondary aim to examine Meillassoux's interpretation of Kant, this thesis also has implications for the issue of realism that motivated Meillassoux's criticism of Kant and that, this thesis has argued, could be resolved through Kant's treatment of space. Once again, without focusing primarily on the status of Kant as 'correlationist' or not, what the arguments of this thesis show is that the consideration of the external world and the philosophical position of realism is connected to the issue of space; and that any discussion or account of realism must at least engage with space in terms of both its own account of reality or externality, but also in terms of the history of philosophy. The role of space is evident in Meillassoux's assertion of the real world as the 'great outdoors' and his evocation of Cartesian extension, as well as Kant's argument for the refutation of idealism as proving the necessity of the existence of things outside us in space. Furthermore, in addition to these more metaphysical considerations, spatiality is also vitally important to the empirical and scientific engagement with the world, as in the use of the spatial metaphor in Meillassoux's argument about the 'arche fossil' and more directly in Kant's arguments about the orientation of the body between left and right and the scientific doctrine of the body that proceeded through further orientations—on the surface of the

Earth, of the celestial bodies, of the stars, *ad infinitum*—to strive towards the idea of absolute space that underpins all Newtonian physics.

Kant's engagement with Newtonian physics was his attempt to reconcile his philosophical and metaphysical system with the science of his day. Meillassoux argues that his realist project has the same aim, to reconnect philosophical thought with scientific realism. Despite this aim, Meillassoux's temporal philosophy of 'hyper-chaos' encounters problems when it is compared with the actual practice and assertions of the empirical sciences, and these problems are especially evident in the problematic role of space in Meillassoux's system (see §3.4 above). Contemporary physics has moved well beyond the Newtonian mechanics of Kant's day and system, and this presents its own set of challenges to the Kantian Critical project and the roles of time and space. The core of this challenge is that the shift from the Newtonian system to that of relativity set out by Einstein involves new forms of non-Euclidean space (and time, motion and simultaneity) that problematize both Kant's assertion of the apodictic certainty of Euclidean geometry and the Newtonian assumptions of absolute space and instantaneous action at a distance, i.e., the Third Law of Motion (see Friedman 2001, 14 & 28 for discussions of this issue and Strawson 1966, 280 for an example of the objection to Kant). However, while relativity rejects the particular *a priori* structure of Euclidean space identified by Kant, it does not reject *a priori* structures altogether, but rather modifies them through an engagement with the very problems that resulted from that earlier system.

The developments of relativity, both special and general, relied on conceptual advances in geometry (such as those of Poincaré and Reimann) rather than through empirical observation alone (although its ability to explain certain empirical phenomena that could not be adequately explained by classical Newtonian mechanics, such as the progression of the perihelion of Mercury, is one of its advantages over the earlier system, see Friedman 2001, 38). As Friedman argues, "Relativity theory involves a priori constitutive principles as necessary positions of its properly empirical claims, just as much as did Newtonian physics" (2001, 30). Because of the persistence of at least some *a priori* component, Friedman argues that the shift from Newtonian physics to that of relativity is not an empirical disproof of the Kantian system *tout court*, and that in fact Einstein's development and shift is not empirical, but conceptual (23). In terms of the consequences

for the Kantian philosophy, this means that the strict necessity of the apodictic science of Euclidean geometry, as Kant characterized it, must give way to the possibilities of alternative geometries and thus the *a priori* is shown to be “relativized” and “dynamical” and capable of changing, shifting and developing (31).¹³ The shifts in the *a priori* science of space makes possible the conceptualization of new forms of space, time and motion—new spatio-temporal frameworks—that are necessary for the new empirical laws of nature defined by relativity and tested through the process of science (45). Friedman sets up his ‘relativized *a priori*’ in contrast to Quinean epistemological holism that rejects the distinction between the *a priori* and the *a posteriori* so that all knowledge is always empirically revisable (29-35), but within this affirmation of the *a priori* Friedman explicitly maintains a form of what he calls “scientific realism” that he equates with Kant’s “empirical realism” (118). Thus re-emphasizing Kant’s realism and the bond between it and even the most abstract empirical sciences, in precisely the same way that the *a priori* science of geometry underpinned Newtonian physics in the Critical philosophy.

The conceptual shift from Newtonian physics to relativity thus required certain developments in the *a priori* science of geometry that were then recognized by Einstein to be applicable to a conceptual rethinking of the very spatio-temporal framework of the universe. The need to rethink the very spatio-temporal framework of the universe, however, was not driven by empirical problems alone, such as the procession of the perihelion of Mercury, but was in part prompted by conceptual difficulties within the very spatio-temporal framework of Newtonian physics, and in particular the problems surrounding absolute space and absolute motion; that is, problems that Kant also was attempting to confront (Friedman 2001, 75-6 & 101). Thus, the problem of absolute space, precisely as it is developed by Kant at the end of the *Metaphysical Foundations* in terms of a transcendental idea, is a conceptual limit of the earlier system of Newtonian physics, which is not, and perhaps cannot be, overcome or resolved from within that system, but

¹³ Friedman elusively connects the mutability of his ‘relativized *a priori*’ to Wilfrid Sellars’s “logical space of reasons” (85, see also 55). In this Sellarsian terminology returns the meta-issue of the geography of reason itself and the concerns addressed in Chapter 4 above in terms of Kant’s spatial metaphors.

which provides the ground for the development of an entirely new framework. Similarly, just as absolute space as the framework described by Euclidean geometry is the problematic limit of the Newtonian system, is it also a sort of limit from the point of view of the non-Euclidean framework of relativity. Euclidean space is not disproved by the development of non-Euclidean geometries, it rather remains, and is still *a priori*, as one sort of geometry amongst others, indeed as a limited conception of geometry, namely “that of a three dimensional manifold of constant zero curvature” (Friedman 2001, 96).

Importantly, this shows how the preceding conceptual frameworks are preserved by the developments of new ones; and it is precisely the same with the shift between Newtonian physics and relativity (Friedman 2001, 59 & 96). One of the most important developments of relativity is the rejection of Newtonian absolute motion and rest, and their replacement with the absoluteness of the speed of light (Dainton, 318). In this sense, Kant’s recognition of the ‘ideal’ nature of absolute space and the impossibility of determining any privileged absolute frame of reference is prescient. Despite this replacement, however, the spatio-temporal framework of Newtonian physics can be described as a limit case from within the framework of relativity. This is done by “letting the velocity of light go to infinity, so that the light-cone structure present at each point in a general relativistic space-time manifold ‘collapses’ into a Newtonian plane of simultaneity at each point” (Friedman 2001, 97). Thus, in this ‘flat’ space of simultaneity, the Third Law of Motion— instantaneous action at a distance—still holds and Newtonian physics can be used accordingly. Furthermore, despite the developments of both non-Euclidean geometries and the spatio-temporal framework of relativity, such ‘flat’ Euclidean space is still the spatio-temporal framework—the form—of our experience, just as it was for Kant (Friedman 2001, 78).

The relation between time and space is an issue that persists in contemporary debates in physics. Recent developments in quantum cosmology have suggested that time is an illusion and everything and everywhen can be represented through the geometry of special relativity described by Hermann Minkowski (see Barbour 1999 for an account of this position and Smolin 2013 for a contrary assertion of the reality of time). This question or possibility is especially relevant to the arguments and conclusions of this thesis. For just as the assertion of space countered the ‘temporocentric’ primacy of time in philosophy, so

too the co-implication of time and space preserves the necessity of time alongside, and in order to think, space. One of the outcomes of this analysis is a rejection, or at least the necessity of a reassessment, of any theory that asserts the divisibility of time and space, or which treats them as entirely separate entities or structures.

Despite all these developments in non-Euclidean geometry and the associated physics of relativity, those developments alone are not grounds for the straight-out rejection of the Kantian system in its entirety. Indeed, in some way they lend support to the identification of the necessity of some sort of non-empirical and *a priori* conceptual contribution from geometry, i.e. concerning space, for the developments of the empirical sciences.

Following Friedman, this reveals the ‘dynamical’ and ‘relativistic’ nature of the *a priori*, which shifts and develops alongside the empirical sciences. Within these developments it is the co-implication of time and space, and the associated issues of motion and simultaneity—the very issues identified by the present thesis—that are particularly important. Kant’s system, if not absolutely correct in its details concerning the absolute necessity of the apodictic science of (Euclidean) geometry, nonetheless is at least compatible with contemporary developments in the empirical sciences, and at most an important identification of the role that the *a priori* has in those sciences, and in particular the co-implicated *a priori* structures of time and space.

Aside from the specifics of the empirical sciences and the developments of physics, the connection made between space and realism in this thesis also has the consequence of providing a reorientation for how to engage with the philosophical debate between realism and idealism that has been re-energized by Meillassoux’s polemical critique of Kant. The analysis of the relation and co-implication of time and space in Kant and their importance for both the problem of idealism in the ‘amplified’ account of time in the A-Edition of the *Critique* and the refutation of idealism in the B-Edition, now sets out an alternative rubric for examining questions of realism and charges of idealism. This does not mean setting out the issue of realism exclusively in terms of the particular spatial and temporal arguments that Kant puts forward, but rather by using a focus on the issues of space and time as a way to assess and engage with the arguments put forward under the name of realism. As was the case with Meillassoux, such an examination can expose tensions and problematic points in the proposed system. As stated at several points, such an

engagement need not result in outright rejection or endorsement, but it nonetheless provides and prompts the opportunity for the clarification and development of such systems and arguments in relation to other areas and debates in philosophy that are pertinent to the issue and problems of realism and/or idealism.

The interrelation of space and time in Kant thus has many implications beyond the scope of its investigation in the present thesis. The task of the thesis itself, however, has been to use the challenge of Meillassoux as an opportunity and prompt to present an interpretation and analysis of Kant that argues for the centrality of space within his thinking in terms of its co-implication with time. The centrality of space is often somewhat hidden in Kant's thought, either through the 'amplification' of time in the A-Edition of the *Critique* and the role that time plays in Kant's reconfiguration of the principle of sufficient reason and his solution to Hume's problem of induction, or else behind its manifestation in the metaphors that Kant uses to describe the Critical philosophy, which nonetheless, despite their metaphoricity, still reveal important elements of Kant's spatial thinking and the importance of space for his philosophical system. Ultimately, in the argument of the Refutation of Idealism it is the persistence of things in space that completes the theory of transcendental time-determination and proves both the legitimacy of objective knowledge and also the existence of the external world. This has implications for Meillassoux's criticism of Kant as 'correlationist,' but more importantly shows how space is central to Kant's philosophy and that to fully engage with that philosophy one must confront the issue of space.

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