

KNOWLEDGE, OBJECTIVITY, AND SELF-CONSCIOUSNESS

A Kantian Articulation of Our Capacity to Know

by

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This dissertation articulates our human capacity to judge as a capacity for knowledge, specifically for empirical knowledge, and for knowledge of itself as such. I interpret and draw on the account of such knowledge presented by Kant's *Critique of Pure Reason*, situate this account historically, and relate it to relevant contemporary debates. The first chapter motivates my project by assessing the insights and shortcomings of Cartesian epistemology. I argue that while Descartes draws on the essential self-consciousness of judgement to show that the cogito is knowledge, he fails, by his own standards, to secure this status for any judgement beyond the cogito. I conclude that *self-consciousness alone is empty*, but that, since we can judge beyond the cogito, judgement can be given content from elsewhere. The next chapter evaluates the empiricist doctrine that operations of the senses by themselves give content to judgement and can vindicate it as empirical knowledge. I contend that Kant deepens Hume's finding, that empiricism fails to enable us to explain empirical knowledge, into the more radical insight that empiricism fails to enable us to understand the senses as providing any content. I conclude that *the senses alone are blind* and that our account of empirical knowledge must privilege neither sensory givenness nor intellectual self-consciousness. The third chapter contrasts two readings of Kant on the cooperation between *sensibility* and *understanding* in empirical knowledge. I argue, against many Kantians, that the Transcendental Deduction shows that instead of understanding this cooperation *compositionally* – so that operations of sensibility are intelligible independently of acts of the understanding – we must conceive of it *hylomorphically* – so that the *operations of sensibility and understanding constitute*

the mutually dependent matter and form of empirical knowing respectively. The final chapter substantiates this hylomorphism by explicating the form of knowledge as *synthesis*. Following Kant, I argue that *inference* is a species of synthesis and provide a synthetic explanation of inference. The resulting account simultaneously illustrates synthesis, addresses a prominent contemporary problem regarding the nature of inference, and explains how *our capacity to know provides not just isolated glimpses of empirical reality, but a unified conception of it.*

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PREFACE

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INTRODUCTION

[T]he sequence of the systems of philosophy in history [is] the same as the sequence of the logical deductions of the conceptual determinations of the idea. [...] [T]he study of the history of philosophy is the study of philosophy itself (*VLGP I*: 49, my translation).

1. Overview: A Kantian articulation of our capacity to know

As this dissertation's subtitle indicates, its goal is to provide a *Kantian articulation of our capacity to know*. Its topic thus is our human *capacity to know*. That is, our capacity to make judgements that are true of a mind-independent reality. As finite beings not all of our judgements that seem to be knowledge actually are knowledge, thus my project is to provide an account that explains how we can understand at least certain kinds of judgements as knowledge. Since such an account must draw on the very capacity it explains, the explanation is one we, as subjects of this capacity, give of ourselves by means of it. As such, it is a *self-articulation* of our capacity to know. This articulation is *Kantian* in that it interprets and draws on the account of our capacity to know that Kant presents in his *Critique of Pure Reason*. In line with this, it seeks to explain simultaneously how we can understand (i) that our empirical judgements can be theoretical knowledge of a mind-independent reality, and (ii) that the judgements we make in giving this explanation are a priori self-knowledge of our capacity to empirically know such a reality.

The dissertation's central contention consists in a particular interpretation of the Kantian thought that an adequate explanation of empirical knowledge must take into account both the self-consciousness of judgement and the receptivity of operations of the senses. Against the prevailing consensus in Kant scholarship as well as contemporary epistemology and philosophy of mind, I argue that we cannot make sense of the cooperation of understanding and sensibility in empirical knowledge if we conceive of such knowledge *compositionally*. That is, we cannot understand these cognitive capacities as each providing a separable component of empirical knowledge that is intelligible independently of the concept of such knowledge. Instead, I contend that we must

explain the interplay between understanding and sensibility by conceiving of empirical knowledge *hylomorphically*. That is, we must understand each of our cognitive capacities as responsible for an abstractable aspect of our empirical knowledge that can only be understood with reference to the concept of empirical knowledge.

In articulating this hylomorphic interpretation of a Kantian account of knowledge, I both situate it historically and highlight its fecundity for contemporary debates. I motivate and develop my position through readings of the epistemological projects of Descartes and the modern empiricists, specifically Locke and Hume. Furthermore, I substantiate and test my account by relating it to contemporary debates about the nature of knowledge, experience, and reasoning. This strategy reflects the project's historico-systematic approach. On this approach, neither is the history of philosophy understood as just a record of dated views nor are systematic positions used merely as lenses for analyzing historical texts. Instead, the aim is to draw on the insights of the tradition, specifically Kant, to develop self-standing answers to systematic questions of abiding interest. The overall project thus is to develop a historically situated Kantian hylomorphic articulation of our capacity to know and to highlight the fruitfulness of such an account for contemporary thinking about the nature of the human mind and knowledge.

In the rest of this introduction, I briefly sketch the contributions that of each of the four chapters of the dissertation makes to this project.

2. Chapter I: The emptiness of self-consciousness

The first chapter considers Descartes' turn to an investigation of the extent to which our capacity to judge is a capacity to know in the first half of his *Meditations on First Philosophy*. I reconstruct the motivations for and execution of Descartes' epistemological project and assess its insights and shortcomings. I contend that Descartes' central insight is that the essential self-consciousness of

judgement implies that at least the judgement ‘I think (cogito)’ is knowledge, so that (i) our capacity to judge is a capacity to know at least with regard to the cogito, and (ii) we can in principle draw on the self-consciousness of this capacity to investigate the extent to which it is a capacity to know anything beyond the cogito. Furthermore, I argue that the central shortcoming of Descartes’ account of knowledge, by his own methodological standards, is our inability, by appeal to the self-consciousness of judgement alone, to vindicate judgements about anything beyond the cogito as knowledge. That is, *the self-consciousness of judgement alone is empty*. I contend that Descartes fails to realize that his account falls short of his own methodological standards because he fails to fully appreciate the radical metaphysical implications of his revolutionary epistemological project. Specifically, the ramifications of his institution of the distinction between mind and world as two distinct spheres of reality. My conclusion is twofold: (i) We can in principle investigate the extent to which we are knowers by drawing on the self-consciousness of our capacity to judge. (ii) Since we can judge beyond the cogito, the capacity to judge must be able to receive content from a cognitive capacity other than the capacity to judge.

3. Chapter II: The blindness of the senses

The second chapter considers the modern empiricist alternative to Cartesian epistemology. Empiricism holds that, since the receptive operations of our senses by themselves, when all goes well, present mind-independent objects, they provide our judgements with cognitive content and, when all goes well, can vindicate those judgements as knowledge of a mind-independent reality beyond the cogito. I acknowledge the attractiveness of the empiricist account of knowledge, but question its viability by tracing the historical development of a key problem it faces. I argue that the initial form of this problem, implicit in Locke and explicated by Hume, is the following: Since the resources of empiricism do not enable us to understand ourselves as entitled to a conception of

something mind-independent, we cannot vindicate the judgements we make on the basis of operations of the senses that *seem to present* mind-independent reality as *actually presenting* such a reality, i.e. as knowledge. Furthermore, I contend that Kant deepens this problem by seeing that it entails that we cannot even understand the receptive operations of the senses by themselves as presenting anything, so that, with the resources of empiricism, we cannot even vindicate the judgements we make on the basis of operations of the senses as having any cognitive content, i.e. as even seeming to be about anything. My conclusion is twofold: (i) Empiricism fails as an adequate account not only of empirical knowledge but even of judgement, for, as Kant sees, *the receptive operations of the senses by themselves are blind*. (ii) Kant suggests that an adequate account of empirical knowledge must take into account both the receptive operations of the senses and the self-consciousness of judgement, while avoiding the one-sided privileging of either cognitive capacity.

4. Chapter III: Givenness as the matter of knowledge

The third chapter considers two alternative interpretations of the Transcendental Deduction's account of the cooperation between sensibility and understanding in intuitions, as the sensory presentations of mind-independent reality. It is a natural thought – shared by Kant – that for judgements about mind-independent reality to be empirical knowledge they must agree with the mind-independent reality that the senses present. Furthermore, it is a familiar thought that objectivity consists in *complete independence from acts of the understanding*. I argue that together these two thoughts motivate an account – often attributed to Kant – that holds that intuitions must be intelligible independently of acts of the understanding, so that they can be understood as presenting mind-independent reality and thus are able to vindicate judgements about mind-independent reality as empirical knowledge. On this *epistemic compositionism* empirical

knowledge is a compound of independently intelligible intuition and of judgement on the basis of such intuition. I contend that there are two reasons why this epistemic compositionism is implausible both as a reading of Kant and in itself. First, I show that attributing it to Kant conflicts with central elements of his argument in the Transcendental Deduction. Second, I argue that the compositionist claim that intuitions, understood as operations of sensibility by themselves, present mind-independent reality is undermined by the previous chapter's finding that Kant himself sees that operations of sensibility by themselves cannot be understood to even seem to present anything. I provide a reading on which the Transcendental Deduction aims to highlight and think through the sketched shortcomings of epistemic compositionism in order to arrive at a more adequate successor account. On this *epistemic hylomorphism* intuitions involve both a determinable *material* operation of sensibility and a determining *formal* act of the understanding, which are only intelligible as abstractable aspects of intuition. My conclusion is twofold: (i) Epistemic hylomorphism transforms the familiar thought underlying compositionism: objectivity consists simultaneously in *formal agreement with acts of the understanding in general* and *material independence from any specific such act*. (ii) Adopting hylomorphism enables us to understand how we are able to make judgements about mind-independent reality which, when all goes well, are knowledge.

5. Chapter IV: Synthesis as the form of knowledge

The fourth chapter further substantiates the proposed Kantian epistemic hylomorphism by considering the nature of the formal aspect of knowledge in general. I show that Kant holds that, while mere sensory matter cannot be investigated independently of any determining form, the investigation of pure intellectual form independently of any determinable matter is the topic of pure general logic. Accordingly, I focus on Kant's logical articulation of the formal aspect of

knowledge in general, which I identify as synthesis. Synthesis is the intellectual act of holding together representations in a manner that includes conscious of their unity in a knowing. I show that, according to Kant, inference is a species of intellectual synthesis. Inference is the intellectual act of holding together the conceptual terms of a syllogism in a manner that includes conscious of their unity in a concluding. In light of this, I substantiate Kant's account of synthesis through a detailed synthetic account of inference. I contend that the reason for a prominent contemporary puzzle regarding the nature of inference is the assumption of a compositional conception of inference; and I show that a Kantian hylomorphic conception of inference in terms of synthesis can dissolve this puzzle. This further substantiates both the account of synthesis as the formal aspect of knowledge in general and the philosophical fruitfulness of my Kantian hylomorphism. Lastly, I contend that the synthetic conception of inference enables us to understand that our capacity to know is not just a capacity to know mind-independent objects in individual and unconnected judgements based on intuition, as the previous chapter shows, but it is also a capacity to know a lawfully governed mind-independent reality by inferentially unifying those judgements into a science.

I. THE CARTESIAN COGITO

The emptiness of self-consciousness

René Descartes is indeed the true beginner of modern philosophy, insofar as it makes thought the principle. Thought for itself is here distinct from philosophizing theology, which places it on the other side; it is a new ground. (*VLGP III*: 123, my translation)

1. Introduction

This chapter reconstructs the motivation for Descartes' turn to an investigation of the extent to which our capacity to judge is a capacity to know and identifies the central insights and shortcomings of his execution of this investigation. Descartes' central insights are that judgement is essentially self-conscious and that a vindication of judgement as knowledge should draw on this. The central shortcoming of his account is that we cannot, by appeal to the self-consciousness of judgement alone, vindicate anything beyond the judgement 'I think' as knowledge.

Descartes' account of human knowledge in his *Meditations on First Philosophy* is often said to inaugurate modern philosophy as a tradition of thought that breaks with mediaeval Scholastic philosophy. The statement by Hegel cited at the top of this chapter is an instance of this common historical narrative (cf. *VLGP III*: 120). Hegel credits Descartes with being the 'true beginner' of modern philosophy, by 'making thought the principle' and thus breaking with the 'philosophizing theology' of the Scholastic tradition that preceded Descartes. Hegel, however, goes on to explain that although Descartes begins modern philosophy, he does not conclude it. For, while he gives philosophy 'a new ground', he does not fully succeed to follow through on this. That is, according to Hegel, Descartes ultimately fails to overcome the distinction between 'the principle' and 'thought' characteristic of his Scholastic predecessors (cf. *VLGP III*: 126, 138 & 144-5).

Under the supposition that Hegel is on to something, this chapter approaches Descartes' account of our capacity to know by investigating the following five questions:

- (1) What does it mean to say that Descartes, and with him modern philosophy, makes thought the principle of philosophy?

(2) What is meant by saying that Descartes is the true beginner of modern philosophy, i.e. how exactly does his philosophy differ from the philosophizing theology that preceded it?

(3) What kind of project does Descartes base on thought as the new ground of philosophy?

(4) Should we follow Hegel in concluding that Descartes' execution of this project does not live up to the aims that he himself set for it?

(5) What lessons are we to draw from the answers to the previous questions regarding an account of our capacity to know?

To answer these questions, I reconstruct and evaluate Descartes' metaphysico-epistemological¹ project, focusing on the first half of his *Meditations*. In doing this, I argue for the following five answers to the questions just posed:

(1) Descartes makes thought the principle of philosophy by discovering that knowledge requires *certainty* and finding that the only source of certainty is *the self-consciousness of thought*.

(2) He breaks with the Scholastic tradition that preceded him because his epistemological reflections lead to a shift in metaphysical outlook that ushers in *the distinction between mind and world*.

(3) Descartes' epistemological project aims to vindicate certain kinds of judgement as knowledge on the basis of *innate ideas supposedly derived from the self-consciousness of thought alone*.

(4) Descartes' execution of this project fails by *falling short of the constraint of certainty* he himself reveals for it.

(5) While the self-consciousness of thought implies that our capacity to judge is a capacity to know, this capacity alone cannot be the source of any knowledge beyond the cogito.

Here is the plan for the chapter: First, I reconstruct the argument of the First Meditation to bring out the motivation and method of Descartes' epistemological project. Furthermore, I note that while a general thought that is implied by our finitude underlies Descartes' *method of doubt*, there is an important difference in kind between the various kinds of doubt generated by that method (§2). Second, I identify and explain *certainty* as the resulting constraint on knowledge identified by Descartes and reconstruct how, in the Second Meditation, he identifies the cogito as meeting this constraint, in virtue of the self-consciousness of thought, thereby recognizing the cogito as the paradigmatic instance of knowledge (§3). Third, I contend that what is revolutionary or 'modern'

¹ As this description of Descartes' project indicates, my topic is restricted to modern *theoretical* philosophy, especially what we today would identify as metaphysics, epistemology, philosophy of mind, and philosophy of logic.

about Descartes' epistemological project is the manner in which his skeptical reflections replace the Scholastic's metaphysical view of a unified reality, encompassing mind and world, with the modern metaphysical idea of mind and world as two distinct spheres of reality (§4). Fourth, I reconstruct Descartes' attempt, in the Third Meditation, to extend his account of knowledge beyond the cogito by appeal to the ideas of God and the causal principle (§5). Sixth, I show that since Descartes fails to vindicate the certainty of the idea of *substance* (§6.1) and of the *causal principle* (§6.2), his appeal to these ideas in his account of the possibility of knowledge beyond the cogito undermines that account's certainty. Nevertheless, I suggest that there is an interpretation of the causal principle, which, while it is not Descartes', is implicit in his meditations, and which constitutes their central and abiding insight (§6.3). I conclude by noting the insights gained and sketching the path forward (§7).

2. The method of doubt

Here, I reconstruct the argument of the First Meditation to bring out the motivation and method of Descartes' epistemological project. Furthermore, I note that while a general thought that is implied by our finitude underlies Descartes' method of doubt, there is an important difference in kind between the various kinds of doubt generated by that method.

Descartes' *Meditations* investigate human knowledge by means of reflection on such knowledge. In this investigation Descartes takes up the role of a meditator. This is a role that can, in principle, be taken up by any mature human being who seeks to investigate human knowledge. As meditator Descartes reflects not on *his* specific knowledge, but on human knowledge in general, with a view to discovering facts about the supposed human capacity to know. This approach is manifested in Descartes' use of the first-person singular, which serves not to convey facts about a consciousness

that is peculiar to *him*, Descartes; but rather to convey facts about the consciousness of any one of us who takes up the role of the meditator.²

Accordingly, Descartes begins the *Meditations* with a thought that each of us can apply to ourselves. He notes that many of the judgements that we unreflectively suppose to be knowledge turn out on further investigation to be false and so not to be knowledge at all (cf. *Meditations*: 17). Descartes argues that our unreflective propensity for accepting falsehoods potentially undermines our claim to any knowledge at all. The reason for this is that Descartes regards knowledge – or science (*scientia*) – as a holistic system of true judgements that mutually sustain each other as knowledge through their rational agreement. Consequently, if one judgement within this system turns out to be false any other judgement based on it will also be called into question (cf. *Meditations*: 17; *O&R*: 481).

Given this initial thought, in the *Meditations* Descartes aims to develop and execute a method of investigation for arriving at indubitable judgements. The indubitable judgements he thus arrives at can ground knowledge and thus provide the foundation for science, while the method for arriving at those judgements can ground an account of knowledge. Descartes calls this account of knowledge *metaphysics*, which he conceives of as a *first philosophy* grounding all other sciences (including e.g. physics, mechanics, medicine, and morality) as projects to be pursued in their own right.³

To arrive at the required indubitable judgements that are to ground knowledge, Descartes enacts the *method of doubt*. That is, he resolves to doubt or “hold back assent from” any judgement that is “not completely certain and indubitable” (*Meditations*: 18). In order not to have to question each

² In what follows, I will be using the first-person plural to the same effect.

³ Descartes illustrates this metaphorically in the preface to the French edition of the *Principles*, writing: “[T]he whole of philosophy is like a tree whose roots are metaphysics, whose trunk is physics, and whose branches, emerging from the trunk, are all the other sciences, which may be reduced to the three principal ones, namely, medicine, mechanics, and morality.” (cf. *Principles*: 14)

of our judgements individually, but to put all of them into doubt at once, Descartes sets out to question the “basic principles” that we take to support the claim to knowledge of our judgements in general (cf. *Meditations*: 18). Accordingly, in the First Meditation Descartes escalates his doubt in three stages until the claims to knowledge of any of our judgements seem to have been put into question, so that we seem to no longer be able to legitimately claim to have any knowledge at all.

Descartes begins by doubting supposed *empirical knowledge*. Supposed empirical knowledge consists in judgements based on sensory consciousness that seems to present empirical reality. But these judgements constitute knowledge only if that consciousness actually presents empirical reality (cf. *Meditations*: 37, 56-8). For instance, my supposed knowledge that I am sitting by a fire, based on sensory consciousness that seems to present my sitting by a fire, is knowledge only if I am really sitting by a fire (cf. *Meditations*: 18).

Descartes begins his First Meditation by generating doubt about the principle underlying the claim to knowledge of our *empirical judgements*. He writes:

Whatever I have up till now accepted as most true I have acquired either from the senses or through the senses. But from time to time I have found that the senses deceive, and it is prudent never to trust those who have deceived us even once. (*Meditations*: 18)

Descartes’ thought is that since the sensory consciousness that our empirical judgements are based on can fail to reveal the truth to us, we should doubt the claim to knowledge of any judgement that is based on such consciousness.

However, Descartes immediately anticipates an objection to this thought, namely that it applies only to *some* of our empirical judgements, such as our empirical judgements about “objects which are very small or in the distance” (*Meditations*: 18). For example, we might judge a distant tower to be round when it is actually square because, due to the distance, our sensory consciousness presents the tower as seeming round (cf. *Meditations*: 76). Since this consideration only concerns a sub-class of empirical judgements, namely those made under unfavorable conditions, this first

stage of doubt, which I will call the *unfavorable conditions doubt*, fails to undermine the claim to knowledge of *all* our empirical judgements. Specifically, it leaves untouched any empirical judgements about objects that are not subject to unfavorable conditions, such as being very small, distant, or insufficiently or misleadingly illuminated, etc. For instance, as Descartes notes, the claim to knowledge of his empirical judgement “I am here, sitting by the fire” remains untouched by the unfavorable conditions doubt (*Meditations*: 18).

Descartes concludes the anticipated objection to this first stage of doubt by noting that a universalization of this kind of doubt to all our empirical judgements would be tantamount to likening ourselves to madmen, which would undermine the credibility of our entire investigation (cf. *Meditations*: 18/9). His thought is that it would be *irrational* or mad to universalize the unfavorable conditions doubt to all our empirical judgements, and that doing so would make our investigation itself irrational. However, since, as we saw, knowledge is a system of *rationally* related true judgements, this would mean that our investigation and whatever it discovers would be unable to qualify as knowledge. Thus, the universalization of the unfavorable conditions doubt would undermine the very aim of our project, namely to provide an account of knowledge that can itself claim to be knowledge and thus vindicate the possibility of science.

However, Descartes immediately counters this objection, noting:

As if I were not a man who sleeps at night, and regularly has all the same experiences while asleep as madmen do when awake [...]. How often, asleep at night, am I convinced [...] that I am here in my dressing-gown, sitting by the fire – when in fact I am lying undressed in bed. (*Meditations*: 19).

Descartes here points out that it is possible that our sensory consciousness that seems to present empirical reality may be consciousness that *merely seems* to present such a reality. For, we could unbeknownst to ourselves be dreaming rather than waking, and in this case our consciousness would merely seem to present empirical reality, so that we do not know. Given the possibility that the basis for any of our empirical judgements may, unbeknownst to ourselves, be consciousness

that *merely seems to present* empirical reality, e.g. a mere dream, Descartes concludes that we should doubt the claim of any of our empirical judgements to *be* knowledge.⁴ The possibility of dreaming shows that empirical reality is external to and independent of our consciousness that seems to present it, so that any judgement based on such consciousness alone may fail to be true of empirical reality and so may fail to be empirical knowledge. I call this the *dreaming doubt* (cf. *Meditations*: 19 & 76/7).

The dreaming doubt undermines the basic principle that we take to support the claim to knowledge of our empirical judgements, namely that sensory consciousness that seems to present empirical reality can vindicate judgements about that reality as knowledge. It thus vindicates Descartes' initial assertion not to trust any judgement that is based on sensory consciousness.

With this second stage of the method of doubt in place, Descartes goes on to acknowledge that even dreams must involve certain elements that constitute them as consciousness that seems to present empirical reality. These elements include, according to Descartes, the proper and common sensibles, such as color, extension, shape, quantity, etc. (cf. *Meditations*: 19/20, 43, 63/4). He points out further that any consciousness that seems to present empirical reality, whether real or dreamt, includes consciousness of features of these elements of consciousness. Descartes describes these elements as 'simple and universal' (*Meditations*: 20). They are simple because they are individual unanalyzable objects of seeming sensory consciousness, and universal because they are instances of some specific kind of sensible.⁵

⁴ At the end of the Sixth Meditation, having established the possibility of empirical knowledge, Descartes claims that there in fact is a criterion that distinguishes empirical judgements based on sensory consciousness that presents empirical reality from those based on sensory consciousness that merely seems to present empirical reality, namely the former, unlike the latter, are rationally tied into a system of true judgements by memory (cf. *Meditations*: 89).

⁵ Descartes here acknowledges the traditional picture of sensory affection, on which the effect of each of our senses being affected is taken to be consciousness of a determinate sensible proper to it, given the specific sense it is – vision is taken to afford us consciousness of determinate colors, audition of determinate sounds, olfaction of determinate smells, etc. Moreover, simultaneous affection of multiple senses is taken to afford us consciousness of a determinate common sensible – like extension, shape, quantity, etc. For a characterization of the proper and common sensibles along these lines, see e.g. *DA* II.6, III.1 & 3 and *Sense and Sensibilia*.

Given the dreaming doubt, the claim to knowledge of any empirical judgements is doubtful. However, Descartes notes that on the basis of consciousness that seems to present empirical reality, whether real or dreamt, we seem to be able to know facts about the elements that constitute that consciousness. For example, consciousness that seems to present something square, whether dreamt or real, includes consciousness of the shape square *as* having four-sidedness as a feature, so that we seem to be able to know that squares have no more than four sides (cf. *Meditations*: 21, 64/5). That is, we can make judgements about the elements of consciousness – I call them *rational judgements* – that are untouched by the dreaming doubt and thus seem to be knowledge – I call this *rational knowledge*: knowledge, for example, of geometrical facts.⁶

Here is Descartes' conclusion to this effect:

[A] reasonable conclusion from this [i.e. the dreaming doubt] might be that physics, astronomy, medicine, and all other science of composite things [i.e. supposed empirical knowledge], are doubtful; while arithmetic, geometry, and other subjects of this kind [i.e. supposed rational knowledge], which deal only with the simplest and most general things, regardless of whether they really exist in nature [i.e. empirical reality] or not, contain something certain and indubitable. [...] It seems impossible that such transparent truths should incur any suspicion of being false. (*Meditations*: 20)

Descartes here notes that the basis for our judgements about features of the elements of consciousness seems to be 'transparently true' or 'clear and distinct' (cf. *Meditations*: 20, 36/7). That is, in being conscious of the features of elements of consciousness we cannot doubt that those elements have the features we are conscious of.⁷ For, whether we are dreaming or waking, our consciousness is constituted from the same elements, so that my judgement that those elements have those features, based on my consciousness of those elements, seems to be knowledge (*Meditations*: 20, 69/70; *Principles*: §45; *Regulae*: 368/9). For example, in being conscious of the

⁶ For Descartes, supposed rational knowledge is restricted to knowledge of facts about the common sensibles, since the proper sensibles are too confused and obscure to provide knowledge by themselves (cf. *Meditations*: 43; n.23).

⁷ The feature of transparent truth that Descartes here identifies as characteristic of supposed rational knowledge is equivalent to what later in the *Meditations* and elsewhere he calls the 'clarity and distinctness' of ideas. For, Descartes defines clear and distinct ideas as ideas that are such that, while they are held in the mind, they cannot be doubted, i.e. they are transparently true (cf. *Meditations*: 69/70; *Principles*: §45; *Regulae*: 368/9).

shape square *as* having four-sidedness as a feature we cannot doubt that squares have no more than four sides, so that our judgement to that effect, based on that consciousness, seems to be knowledge. Our rational judgements seem to be rational knowledge.

However, having concluded that the dreaming doubt leaves supposed rational knowledge untouched, Descartes goes on to institute the third stage of his method of doubt, designed to undermine even the claim to knowledge of our rational judgements. He notes that it is possible that our consciousness that seems to present the features of elements of consciousness may be consciousness that *merely seems* to present those features. For, our consciousness could be due to either (a) an omnipotent God, or (b) the imperfection of our cognitive capacities; either of which could cause us to be conscious of what merely seem to be the features of elements of consciousness when actually they are not (cf. *Meditations*: 21, 36 & 77). Hence, since it is possible that the basis for our rational judgements is consciousness that *merely seems to present* the features of elements of consciousness, Descartes concludes that we should doubt the claim of our rational judgements to *be* knowledge. The possibility of deception shows that the features of elements of consciousness are external to and independent of our consciousness that seems to present them, so that any judgement based on such consciousness alone may fail to be true of those features and so may fail to be rational knowledge. I call this the *deceiver doubt*.⁸

The deceiver doubt undermines the basic principle that we take to support the claim to knowledge of our rational judgements, namely that seemingly transparently true consciousness of features of elements of consciousness can vindicate judgements about those features as rational knowledge. It thus targets what the dreaming doubt left untouched, thereby seeming to undermine

⁸ There is a sense in which it is misleading to call the worry animating the deceiver doubt a kind of doubt at all, for, as we will see, it turns out to be a worry about the very possibility of doubting itself, and whether or not doubting is possible is not something it is possible to coherently doubt, so that the deceiver doubt cannot be a doubt *sensu stricto* (cf. Conant 2020: 667; cf. n.14 & §3).

the claim to knowledge of *all* judgements that we unreflectively suppose to be knowledge (cf. *Meditations*: 21-4).

Before considering what constraint Descartes' method of doubt reveals for knowledge, I want to make two comments about his use of the method of doubt in the First Meditation.

First, Descartes' three stages of doubt are unified by a common general thought that is implied by our finitude (cf. §5). This thought is the following: Given that we are finite, imperfect beings, who, as such, may err in the exercises of our finite, imperfect cognitive capacities without being conscious of those errors in those exercises, how can we understand our exercises of those capacities as constitutive of knowledge? As we just saw, Descartes progressively universalizes his doubt by a stepwise application of this thought to all our relevant cognitive capacities.

Descartes recognizes three relevant cognitive capacities: (1) the intellect or understanding, (2) the imagination, and (3) the senses (cf. *Regulae*: 398 & 411; *Meditations*: 57 & 71/2).⁹ The *intellect* is the capacity to assert reality to be some way by affirming the existence of a reality corresponding to the contents of consciousness, i.e. the capacity to judge (cf. *Meditations*: 37).¹⁰ The *imagination* – in line with traditional views about the 'common sense' – is the capacity to combine the elements of consciousness into a contentful consciousness (cf. *Meditations*: 32 & 86). The *senses* are the capacity to receive consciousness of the various sensibles as the elements of sensory consciousness.

Descartes begins by reflecting on the fallibility of our senses. This leads to the unfavorable conditions doubt, which undermines the claim to knowledge of our empirical judgement in certain conditions. He then turns to the imagination, noting that it is a capacity, not only to truthfully

⁹ Descartes identifies *memory*, as the capacity to store and recall the deliverances of any of the other cognitive capacities, as a fourth cognitive capacity.

¹⁰ Descartes characterizes the capacity to judge as composed of the intellect ('faculty of knowledge'), which perceives or apprehends the contents of judgements or ideas, and the will ('faculty of choice'), which freely affirms (or denies) the existence of a reality corresponding to the contents of judgements or ideas perceived by the intellect (cf. *Meditations*: 56-8).

combine the elements of consciousness into a consciousness that presents empirical reality, as in supposed perceiving, but also to freely recombine those elements into a consciousness that merely seem to present empirical reality, as in dreaming. This cognitive imperfection of our imagination motivates the dreaming doubt, which undermines the claim to knowledge of our empirical judgement in general. Lastly, Descartes reflects on the finitude of our capacity to judge. This leads to the deceiver doubt, which undermines the claim to knowledge of our rational judgement. Descartes thus progressively applies the thought implied by our finitude to motivate the provisional suspension of any of our judgements that we unreflectively suppose to be knowledge.

Second, although the dreaming doubt and the deceiver doubt are motivated by the same general thought, they do not merely differ in degree but in kind (cf. Conant 2020: 665-70).^{11, 12} That is, contrary to what is often supposed, the deceiver doubt should not be interpreted as just a more intense version of the dreaming doubt.¹³

Prima facie it might seem that, just as the dreaming doubt raises the question whether what, on the basis of sensory consciousness, we assert to be the case, say ‘I am here sitting by a fire’, really is the case, so the deceiver doubt raises the question whether what, on the basis of consciousness of features of elements of consciousness, we assert to be the case, say ‘squares have four sides’, really is the case. After all, both the dreaming doubt and the deceiver doubt are rooted in the same general thought implied by our finitude.

¹¹ The distinction between two kinds of doubt is explicit in the *Principles*, where Descartes brings up the two kinds of doubt separately one after another (cf. *Principles*: §§4/5). §4 is concerned with “The reason for doubt concerning the things that can be perceived by the senses”, while §5 treats “The reason for doubting even mathematical demonstrations”.

¹² There is also a difference in kind between the unfavorable conditions doubt and the dreaming doubt. The former kind of doubt calls into question empirical judgements in unfavorable conditions, so that we can correct those judgements by means of further empirical judgements in favorable conditions, enabling us to hold on to the possibility of empirical knowledge in general. By contrast, the latter kind of doubt calls into question empirical judgements independently of any specific conditions, thus undermining the possibility of empirical knowledge in general. I return to this in §4.

¹³ For interpretations to this effect, see e.g. Williams (1978: Ch. 2) and Larmore (2014: 54).

However, doubting the reliability of our capacity to judge has radically different implications than taking our senses and imagination to be unreliable. For, by calling into question whether we can rely on our capacity to judge as a capacity to know rationally in our search for indubitable judgements, the deceiver doubt, unlike the dreaming doubt, calls into question whether in this investigation we can rely on the very capacity that we are exercising in framing our investigation in the first place, namely our capacity to judge as a supposed capacity to know rationally. This comes out in the fact that the logical principles we are following in exercising the capacity to judge, such as say the principle of non-contradiction that judging p and judging not-p are mutually exclusive, seem transparently true to us. Now, doubting whether these principles which we conform to in exercising our capacity to judge are in fact true would mean to doubt the very principle we are relying on to formulate our doubt. Consequently, doubt about our capacity to judge being a capacity to know rationally, unlike doubt about the senses or imagination, threatens not only empirical knowledge, as knowledge of a specific domain of reality, namely empirical reality, but more radically the very possibility of an account of knowledge given by means of that capacity and thus the very idea of knowledge itself (cf. Conant 2020: 665/6).¹⁴

3. Certainty and the cogito

Having reconstructed the motivation for and method of Descartes' institution of seemingly total doubt in the First Meditation, I here identify and explain certainty as the resulting constraint for

¹⁴ Descartes himself does not draw this radical conclusion, presumably because doing so would put our rationality into question. And as he points out when objecting to the initial attempt at universalizing the unfavorable conditions doubt, it cannot be part of a rational investigation into our capacity to know to question our rationality, since we would thereby question the suitability of the very means by which we are conducting that investigation (cf. *Meditations*: 19). In other words, Descartes' reluctance to formulate the deceiver doubt's implication in these radical terms is due to the supposed doubt's manifest absurdity. For in asking whether we can rely on our capacity to judge as a capacity for rational knowledge, we are of course always already exercising that very capacity (cf. n.8). As we will see, it is for this reason that the deceiver doubt leads us straight to the discovery of the cogito. For any exercise of our capacity to judge is (at least) rational knowledge of itself as an exercise of our capacity to judge, i.e. of the cogito (cf. *Meditations*: 25; *Regulae*: 421; Conant 2020: 668 n.24; §3).

knowledge. Furthermore, I reconstruct how, in the Second Meditation, Descartes identifies the cogito as meeting this constraint, in virtue of the self-consciousness of thought, thus recognizing it as the paradigmatic instance of knowledge.

As we saw, a judgement asserts reality to be some way by affirming the existence of a reality corresponding to the contents of consciousness. As such, a judgement is based on consciousness that seems to present reality, and a judgement is true, and thus knowledge, if the content of that consciousness corresponds to reality (cf. *Meditations*: 37, 56-8).¹⁵ Furthermore, we saw that the dreaming and deceiver doubt show that, given our finitude, it seems to be always possible that the basis for our judgements is consciousness that *merely seems* to present reality – empirical reality in the case of supposed empirical knowledge and features of elements of consciousness in the case of supposed rational knowledge. Therefore, we should doubt the claim of our empirical and rational judgements to *be* knowledge. The possibilities of dreaming and deception seem to show that reality is external to and independent of consciousness that seems to presents it, so that any judgement based on such consciousness alone may fail to be knowledge (cf. §2).

This general insight implies a constraint on any judgement that can legitimately claim to be knowledge, namely: For any judgement to be knowledge, the reality that is asserted to be some way must be internal to and not independent of the consciousness that that judgement is based on, so that the judgement based on that consciousness cannot fail to be true. I call this constraint *certainty*:

[CERTAINTY] A judgement is knowledge if and only if it is impossible that the basis for that judgement is consciousness that merely seems to present reality.

¹⁵ While Descartes holds that truth ‘in the strict sense’ is a feature exclusively of judgements, he distinguishes ‘formal truth’ from ‘material truth’ (cf. *Meditations*: 43). *Formal truth* (or falsity) applies to judgements: A judgement is formally true if and only if the object (or quality) corresponding to the content of the consciousness or idea that the judgement asserts to exist, exists externally to and independently of that judgement (cf. *Meditations*: 37). *Material truth* (or falsity) applies to states of consciousness or ideas: A state of consciousness or idea is materially true if and only if an object (or quality) corresponding to its content exists externally to or independently of that state of consciousness or idea (cf. *Meditations*: 43/4).

The one judgement that Descartes famously identifies as living up to the constraint of certainty is the cogito. That is, the judgement, as Descartes puts it in the *Discourse* and *Principles*, “*I am thinking, therefore I exist*” (*Discourse*: 33; *Principles* §7; cf. *Meditations*: 25). Descartes arrives at the cogito by pushing the method of doubt as far as possible: When we try to doubt everything that it is possible to doubt, we realize that it is impossible to doubt that we think, because our attempt to doubt this is an act of thinking. Put simply, if we try to think that we are not thinking, we are thinking. That is, the falsity of the judgement that we are not thinking is guaranteed by the fact that the consciousness that that judgement would have to be based on would constitute an act of thinking. Similarly, if we think that we are thinking, we are thinking. That is, the truth of the judgement that we are thinking is guaranteed by the fact that the consciousness that that judgement is based on constitutes an act of thinking. Descartes writes: “I must finally conclude that this proposition, *I am, I exist*, is necessarily true whenever it is put forward by me or conceived in my mind.” (*Meditations*: 25)

The cogito is certain because it is impossible that the basis for our judgement that we think, namely our consciousness of our act of thinking, is consciousness that merely seems to be of our act of thinking. For our consciousness of our act of thinking, as the act of thinking it is, is not something external to or independent of that act of thinking; there could not be that consciousness if there were not the act of which it is consciousness. Accordingly, in thought, our consciousness of our act of thinking, on the one hand, and our act of thinking, on the other, are two aspects of a single cognitive act. Consequently, our act of thinking is internal to and not independent of our consciousness of that act of thinking, so that the judgement ‘I think’ based on that consciousness is knowledge. The judgement is knowledge because the actuality of what validates the judgement that we think, namely our act of thinking, cannot be external to or independent of our consciousness of that act of thinking.

What Descartes discovers is that the cogito's certainty is based on the self-consciousness of thought. That is, on the fact that in being conscious of our thinking, we are thinking, or in other words, that an act of thinking is internal to and not independent of our consciousness of our act of thinking. The nominal definition of *self-consciousness* is:

[SELF-CONSCIOUSNESS] Self-consciousness is consciousness that includes consciousness of itself.

The upshot of this is that the cogito, as a judgement about thought, is certain because of the self-consciousness of thought.

The cogito, unlike judgements about seeming geometrical facts, withstands the deceiver doubt because its basis does not *merely seem to be* transparently true, but *actually is* transparently true. In rationally judging 'squares have no more than four sides' it seems transparently true to us that the shape square has four-sidedness as a feature. However, the deceiver doubt brings out that this consciousness might merely seem to be transparently true, for there is nothing internal to that consciousness that rules out that its seeming to be transparently true is a *mere seeming* implanted in us by a deceiver or due to our finitude. In rationally judging 'I think' it seems transparently true to us that we are thinking. And, here this consciousness is actually transparently true, for it is internal to that consciousness of thinking that we are thinking, so that there is no room for the possibility that its seeming to be transparently true is a *mere seeming* implanted in us by a deceiver or due to our finitude.

What this reveals is that the deceiver doubt, instead of raising the supposed question whether we can rely on our capacity to judge as a capacity to know rationally, always already implies the cogito's certainty as an answer to this question. For doubting whether we can rely on our capacity to judge as a capacity to know rationally includes (at least implicit) consciousness that we are thinking, thereby equipping us with the basis for the cogito as the paradigmatic instance of rational knowledge (cf. *Meditations*: 58). Descartes puts this point as follows:

If, for example, Socrates says that he doubts everything, it necessarily follows that he understands at least that he is doubting, and hence that he knows that something can be true or false, etc.; for there is a necessary connection between these facts and the nature of doubt. (cf. *Regulae*: 421)

The upshot of this is that we cannot coherently doubt that our capacity to judge is, at least with respect to the cogito, a capacity to know rationally (cf. ns.7 & 13). The cogito thus imposes a limit on what we can intelligibly doubt.¹⁶ As such, the cogito, whose certainty is grounded in the self-consciousness of thought, is the indubitable first judgement of metaphysics on which Descartes aims to ground knowledge. It is in this sense that Descartes ‘makes thought the principle’ of his philosophical project. This is the answer to our first question.

However, as we saw, according to Descartes the cogito is not only the judgement ‘I think’: it is the judgement ‘I think, *therefore I am*’ or ‘*I am, I exist*’. That is, Descartes claims that our consciousness of our act of thinking includes (at least implicit) consciousness of ourselves not just as thinking, but as a “thinking thing” or *substance* (*Meditations*: 27).¹⁷ While my discussion so far has sidestepped this controversial metaphysical issue, I return to it below (cf. §6).

For now, I want to offer a minimal, logical interpretation of the claim ‘therefore I am’; namely that our consciousness of our act of thinking includes consciousness of ourselves *as being a thinker*. On this reading, what ‘therefore I am’ expresses is that in being conscious of our act of thinking, as such, we can be conscious of our capacity to think or judge, which capacity is exercised in our

¹⁶ Thomas Nagel puts this point well. He writes: “I would explain the point of Descartes’s *cogito* this way. It reveals a limit on the kind of self-criticism that begins when one looks at oneself from the outside and considers the ways in which one’s convictions might have been produced by causes which fail to justify or validate them. What is revealed in this process of progressively destructive criticism is the unavoidability of reliance on a faculty that generates and understands all the skeptical possibilities. [...] [S]kepticism that is the result of an argument cannot be total. In the cogito the reliance on reason is made explicit, revealing a limit to this type of doubt. [...] The point is that Descartes reveals that there are some thoughts which we cannot get *outside* of. [...] There are some types of thoughts that we cannot avoid simply *having* – that it is strictly impossible to consider merely from outside, because they enter inevitably and directly into any process of considering ourselves from the outside, allowing us to construct the conception of a world in which, as a matter of objective fact, we and our subjective impressions are contained.” (Nagel 1997: 19/20)

¹⁷ Descartes explicitly states that the cogito does not express an inference, writing: “When someone says ‘I am thinking, therefore I am, or I exist’, he does not deduce existence from thought by means of a syllogism, but recognizes it as something self-evident by a simple intuition of the mind.” (*O&R*: 140)

act of thinking. So in this act, we can be conscious of ourselves as possessing a capacity in virtue of which we are thinkers: We are conscious of ourselves as *being thinkers*.

4. Mind and world

Having reconstructed the motivation and execution of Descartes epistemological project, I here contend that what is revolutionary about it is the manner in which his skeptical reflections replace the Scholastic's metaphysical view of a unified reality, encompassing mind and world, with the modern metaphysical idea of mind and world as two distinct spheres of reality.

Descartes' Scholastic predecessors adhere to the so-called *peripatetic axiom* according to which "[n]othing is in the intellect that was not previously in sense" (*De Veritate*: q. 2 a. 3 arg. 19; cf. *Discourse*: 37; *Meditations*: 18). We can state the peripatetic axiom as follows:

[PERIPATETIC AXIOM] Any content of consciousness derives originally from operations of the senses.

The senses are the original source of any content of consciousness, and thus of judgement and knowledge. Accordingly, the Scholastics hold that judgements which are knowledge are ultimately based on sensory consciousness that at least seems to present reality and that when all goes well, i.e. when conditions are favorable, actually does present reality, so that our judgements are knowledge.

Thus, the reason why, in the First Meditation, Descartes begins by doubting the claim to knowledge of our empirical judgements is not merely because there is some pre-philosophical plausibility to the thought that at least some of our judgements that are knowledge are based on sensory consciousness, but also because he specifically aims to call into doubt this basic principle of Scholastic epistemology.¹⁸

¹⁸ When, in the Sixth Meditation, Descartes recapitulates his previous unreflectively accepted judgements he cites the peripatetic axiom, writing: "I had nothing at all in the intellect which I had not previously had in sensation" (*Meditations*: 75/6).

Scholastic epistemology conceives the simple and universal elements that constitute sensory consciousness – i.e. the proper and common sensibles, which Descartes identified as surviving his dreaming doubt – as so called *sensible species* or sensible forms. Following Aristotle, form (*morphe*) is associated with actuality, i.e. being actually some way. For example, being actually a table. Matter (*hule*) is associated with potentiality, i.e. being able to take on ways of actually being. For example, some wood, qua matter, is able to take on other ways of actually being (besides actually being wood), like being actually a table (cf. *Meta.* IX.5-7). Sensible forms thus are conceived as the sensibly accessible actualities, qualities, or ways to actually be of empirical objects (cf. *DA* II.12). On Aristotelian-Scholastic doctrine, while our senses, of course, have their own sensibly accessible actuality qua material organs, qua receptive capacity, which is enabled by those material organs, they have no such proper sensibly accessible actuality, so that they are able to be shaped by the sensible actualities of the empirical objects that affect them qua material organs (cf. *DA* II.5 & 12).¹⁹ We can state the doctrine of sensible species as follows:

[SENSIBLE SPECIES] Sensory consciousness is constituted by the sensible actualities of empirical objects being actualized in the senses, qua receptive capacity, in virtue of those objects affecting the senses, qua material organs.

The Scholastics thus conceive of empirical judgement as follows: Our senses qua material organs are affected by empirical objects that possess certain sensible actualities or qualities. Upon affection, these sensible actualities or qualities shape our senses qua receptive capacity, so that the same arrangement of actualities or qualities that characterize the objects in question is also actualized in our senses. This constitutes sensory consciousness of arrangements of sensible actualities or qualities and thus of the empirical objects that are characterized by them, thereby providing our intellect with a basis for empirical judgements (cf. *Summa*: I, q. 12 a.9, q. 14 a. 5; q. 85 a. 2 ; *De Veritate*: q. 10 a. 8 ad 2um; *Optics*: 85). The Scholastics thus hold that through sensory

¹⁹ I leave the details of the process of affection intentionally vague as they do not matter for my purposes here.

affection the intellect passively receives arrangements of sensible actualities that characterize empirical objects, while itself being a mere storehouse and housekeeper of these arrangements.

On this conception, sensory consciousness is a process within reality in which our senses, qua receptive capacity, are enformed by the sensible forms of empirical objects. Sensory consciousness just is one's senses, which qua material organs are constituents of reality, being shaped by the sensible actualities of empirical objects, which are further constituents of reality. On this picture, empirical judgement is knowledge only if the arrangement of sensible qualities in our sensory consciousness coincides with the sensible qualities of the empirical object judged about.

On this conception only limited doubt regarding the claim to knowledge of our empirical judgements is possible. For without our senses being affected by empirical objects at all, there would be no sensory consciousness to base empirical judgements on, i.e. nothing to doubt in the first place. Of course, our senses could be defective, thus deceiving us about the true sensible qualities of empirical objects. However, any such deception rooted in a defect would presumably be both limited to specific senses and more or less systematic. Consequently, it should be possible, with experience, to become aware of and correct for any such defect of our senses by means of further empirical judgement, so that the imperfection of our senses does not undermine the claim to knowledge of empirical judgement in general. That is, the only doubt that gets a grip in Scholastic epistemology is the limited unfavorable conditions doubt (cf. n.11).

Against this background it becomes possible to articulate the way in which Descartes' epistemological project marks a break from Scholastic epistemology and the metaphysics that underlies it. What is crucial is the way in which Descartes conceives of the simple and universal elements of seemingly sensory consciousness – i.e. the proper and common sensibles. For, rather than conceiving of them as sensible species – i.e. as the sensibly accessible qualities of empirical objects, which upon affection of our senses, qua material organs, by those objects, become

actualized in our senses, qua receptive capacity – he conceives of them as *consciousness* or simple *ideas* of those sensibles provided by the senses which the imagination combines into consciousness or complex ideas that seem to present empirical reality.

This conception of the simple and universal elements of consciousness is evident in Descartes' likening those elements to the role that color pigments play in painting (cf. *Meditations*: 20). What he seems to have in mind is that, while the color pigments the painter combines to represent something on a canvas, as such, are not the same actuality or actual being as what they represent – the former are color pigments, the latter are whatever the painting represents – they still must be real color pigments. By analogy, while the simple and universal elements of consciousness that the imagination combines into consciousness that seems to present empirical reality, as such, are not the same actualities as those that characterize the empirical objects they seem to present – the former are simple and universal elements of consciousness, the latter are sensible qualities of empirical objects – they still must be real elements of consciousness.

Descartes thus effectively rejects the Scholastics' doctrine of sensible species. Instead, he suggests that the senses provide consciousness or simple ideas of sensibles, for the imagination to combine into sensory consciousness or complex ideas, which need not have anything in common with the empirical reality that they thus seem to present.

The impetus for Descartes' rejection of the doctrine of sensible species are findings of the emerging natural sciences, especially optics. The crucial insight is that an empirical object that by means of sensory affection causes the presence of some sensible quality in sensory consciousness does not itself have to possess that sensible quality (cf. *Optics*: 85; *Comments*: 358/9). For, that something appears to have a particular sensible quality is determined not only by the way that thing is, but also by the way our senses are constituted and how it affects them. For instance, as Descartes explains, “in the bodies we call ‘coloured’ the colours are nothing other than the various ways in

which the bodies receive light and reflect it against our eyes.” (*Optics*: 85) That is, the actuality of being colored that is an element of our consciousness that seems to present empirical reality is not an actuality that characterizes that object in empirical reality. This insight into the qualitative unrelatedness between consciousness that seems to present empirical reality and that reality itself renders the metaphysics underlying the Scholastic account of empirical judgement untenable, and motivates Descartes’ alternative explanation of such judgement. As Descartes puts it: “By this means [i.e. by means of this insight], your mind will be delivered from all those little images flitting through the air, called ‘intentional [i.e. sensible] form’, which so exercise the imagination of the philosophers.” (*Optics*: 85)

Descartes’ rejection of the doctrine of sensible species implies that our senses (and imagination) present empirical reality indirectly via consciousness or ideas that seem to present that reality. Additionally, the finitude of our cognitive capacities implies that our senses (and imagination) can err in seemingly presenting empirical reality, without us being conscious of that error, so that our consciousness or ideas can always *merely seem* to present empirical reality. That is, there is no guarantee that what our consciousness or ideas seem to present exists externally to or independently of our consciousness or those ideas. Accordingly – drawing on a Scholastic distinction – Descartes distinguishes the kind of reality had by *contents of consciousness* or ideas, on the one hand, and *reality*, on the other, as follows: Contents of ideas are *objectively real*, i.e. they exist as objects of consciousness, while elements of reality are *formally real*, i.e. they exist as objects that are external to and independent of any consciousness of them (cf. *Meditations*: 40; *O&R*: 161).

On Descartes’ alternative conception there thus emerges a distinction between the contents of consciousness and reality, or between *mind* and *world*. On this conception, seemingly universal doubt regarding our supposed knowledge becomes possible. For, due to the imperfection of our cognitive capacities, our consciousness could seem to present reality without actually presenting it,

so that our judgements about that reality do not qualify as knowledge. The consequence of this is that unless we can somehow show that our consciousness does not merely seem to present reality, we have reason to doubt the claim to knowledge of any of our judgements. Descartes' method of doubt highlights the difficulty in showing that our consciousness *actually* presents reality, i.e. that our judgements are knowledge.

In light of this seemingly universal doubt regarding our supposed knowledge, Descartes contends in the previous section – against the peripatetic axiom – that not all our ideas are ‘adventitious’, i.e. derive their content from the senses, but that certain basic ideas must be ‘innate’, i.e. are derived from our capacity to judge in reflection on that capacity as included in the self-consciousness of the cogito (cf. *Meditations*: 37/8; *Comments*: 357/8).²⁰ The paradigm example of such an innate idea is our idea of ourselves as thinkers (cf. §3). This idea cannot be adventitious, for we discover or actualize it in reflection on the cogito, while having, in accordance with the method of doubt, suspended all of our empirical judgements.²¹

In response to our second question, we thus see that it is Descartes' radical break with the metaphysics underlying Scholastic epistemology that makes his philosophical project revolutionary or ‘modern’. For, motivated by the insights of the emerging natural sciences and his method of doubt, he is the first to institute the distinction between mind and world that much subsequent modern philosophy grapples with.²²

²⁰ Descartes explains to Mersenne: “I use the word idea to mean everything which can be in our thought, and I distinguish three kinds. Some are adventitious, such as the idea we commonly have of the sun; others are constructed or made up, in which class we can put the idea which the astronomers construct of the sun by their reasoning; and others are innate, such as the idea of God, mind, body, triangle, and in general all those which represent true, immutable and eternal essences.” (Letter to Mersenne 16 June 1641: 383; cf. *Meditations*: 37/8)

²¹ In the course of the *Meditations*, Descartes identifies the ideas of *body* or empirical reality, *substance* or thing, the *causal principle*, and *God* as further innate ideas (cf. *Meditations*: 34, 38, 40 & 42-6).

²² Hegel notes: “This highest rupture is the most abstract *opposition of thinking and being*; and their reconciliation needs to be grasped. All philosophies from then on [i.e. succeeding Descartes] have as their interest this unity.” (*VLGP III*: 64, my translation)

5. Descartes' vindication of the truth rule

In this section, I reconstruct part of the account of knowledge that Descartes bases on the cogito. Specifically, I elucidate how Descartes seeks to extend rational knowledge beyond the cogito by invoking the ideas of God and the causal principle.

Having, in the Second Meditation, identified the cogito as certain and thus as the paradigmatic instance of knowledge, Descartes asks himself at the start of the Third Meditation what it is about the cogito that makes it invulnerable to the deceiver doubt. He notes that his consciousness of what he judges in the cogito – ‘I think’ – is transparently true or clear and distinct. And, he suggests that this can be generalized into the so-called ‘truth rule’. This rule states that: “whatever I perceive [i.e. am conscious of] very clearly and distinctly is true.” (*Meditations*: 35; cf. 38) The truth rule thus promises to enable us to claim that we can, in principle, know things beyond the cogito. For, according to the truth rule, if we judge what we are clearly and distinctly conscious of, then our judgement is knowledge.

However, Descartes notes that, given the deceiver doubt, our consciousness can *seem to be* clear and distinct without *being* certain (cf. *O&R*: 462). For example, in judging that a square has no more than four sides our consciousness of the shape square *as* having four-sidedness as a feature seems to be clear and distinct, but there is in this case, unlike that of the cogito, nothing internal to our consciousness that rules out the possibility that our consciousness is a mere seeming caused by a deceiver or by the imperfection of our cognitive capacities (cf. *Meditations*: 35/6).

Consequently, what Descartes finds to be needed is an account of how we can apply the truth rule without running the risk of being misled by consciousness that merely seems to be clear and distinct. We need an account of how applying the truth rule can enable judgements, beyond the cogito, that are immune to the deceiver doubt. I call what is required here *the vindication of the truth rule*.

However, the truth rule only affirms the truth of the clear and distinct consciousness that is the basis of rational judgements, while saying nothing about the truth of the sensory consciousness that is the basis of our supposed empirical knowledge. Therefore, a vindication of the truth rule only enables Descartes to recover our supposed rational knowledge, while leaving our supposed empirical knowledge susceptible to the dreaming doubt. Accordingly, while Descartes takes himself to have established the possibility of rational knowledge through his vindication of the truth rule in the Third Meditation, the vindication of the possibility of empirical knowledge is achieved only in the Sixth Meditation (cf. *Meditations*: 78-80).²³ However, since the latter vindication is based on the former, I restrict myself to a discussion of the former (cf. *Meditations*: 78). For, if, as I will suggest, Descartes' vindication of our supposed rational knowledge fails to be certain then this also undermines his vindication of our supposed empirical knowledge (cf. §6).

Descartes begins his vindication of the truth rule with the thought that our consciousness of our thinking includes consciousness of ourselves as thinkers, i.e. the innate idea of ourselves as thinkers (cf. §§2 & 3). Furthermore, he notes that our consciousness of our acts of thinking includes consciousness of doubting and desiring, and that both doubting and desiring imply a lack. Doubt implies a lack of knowledge, while desire implies a lack of whatever the desire is a desire for. Furthermore, a lack is a limitation or imperfection. Therefore, our consciousness of our thinking includes consciousness, or an innate idea, of ourselves as finite, imperfect thinkers (*Meditations*: 44, 46, 54, 56, 90).

²³ Roughly, Descartes argues that we can rationally know that there are thinking substances and extended substances, and that the senses and imagination are qualities of ourselves as thinking substances, while the qualities of extended substances are capacities to affect our senses. Paired with the argument that God is not a deceiver, he contends that this entails that our senses and imagination provide us at least with obscure and confused consciousness of extended reality. Furthermore, we can also rationally know the laws governing extended substances, so that we can clarify and distinguish our obscure and confused consciousness of such substances by drawing on that knowledge, thus attaining empirical knowledge.

The intelligibility of the idea of a lack depends on the idea of the corresponding sufficiency, as that with respect to which what has the lack is lacking or insufficient. Analogously, the intelligibility of the idea of a finite, imperfect thinker as lacking in various respects depends on the idea of the²⁴ infinite, perfect thinker that is lacking in nothing. That is, on a thinker that does not doubt or desire, but is all-knowing and all-powerful (cf. *Meditations*: 40 & 45). Put differently, a finite, imperfect thinker is, as such, the limitation or imperfection of the infinite, perfect thinker.²⁵

Descartes puts this insight like this:

[H]ow could I understand that I doubted or desired – that is, lacked something – and that I was not wholly perfect, unless there were in me some idea of a more perfect being which enabled me to recognize my own defects by comparison? (*Meditations*: 46)

[W]hen I consider the fact that I have doubts, or that I am a thing that is incomplete and dependent, then there arises in me a clear and distinct idea of a being who is independent and complete, that is, an idea of God. (*Meditations*: 53; cf. 51 & 57)

Accordingly, reflection on the cogito actualizes not only our innate idea of ourselves as finite, imperfect thinkers but also our innate idea of the infinite, perfect thinker, which, Descartes argues, has logical (and ontological) priority over our idea of ourselves as finite, imperfect thinkers (cf. *Meditations*: 51 & 53/4).²⁶

Descartes thus expresses what is at its core a logical insight – that privative concepts depend on the corresponding non-privative concept – in ontological-cum-theological terms, identifying our idea of the infinite, perfect thinker as the idea of God (cf. *Meditations*: 45/6).

²⁴ I say *the* infinite, perfect thinker, because for there to be two or more such thinkers they would have to differ in their qualities, i.e. one would have to possess a quality that another lacks and vice versa, but if a thinker lacks some quality, she is *ipso facto* not infinite, perfect. Descartes points to this consideration, when he notes, in the Fifth Meditation: “I cannot understand how there could be two or more Gods of this kind” (*Meditations*: 68).

²⁵ This dependence of our idea of ourselves on the idea of God also explains Descartes’ claim that the idea of God is “the first and most important” of the innate ideas, which might otherwise seem puzzling given that the first innate idea we discover in our meditations is the cogito (*Meditations*: 68, cf. 45/6).

²⁶ Descartes notes that as finite, imperfect thinkers we cannot ‘grasp’ but merely ‘understand’ the idea of an infinite, perfect thinker (cf. *Meditations*: 40). He explains to Mersenne that understanding something yet not grasping it, is like touching a mountain yet not putting one’s arms around it. To grasp something is to embrace it in thought, while one can understand something just by touching it with one’s thought (cf. Letter to Mersenne, 27 May 1630: 152; *Meditations*: 52).

Having derived the innate idea of God that “is in some way prior to my perception of the finite, that is myself” from reflection on the consciousness that grounds the cogito, Descartes draws on this idea to execute what at its outset he announced as the aim of the Third Meditation, namely (*Meditations*: 45):

To remove even this slight reason of doubt [i.e. the deceiver doubt], [...] I must examine whether there is a God, and if there is, whether he can be a deceiver. For if I do not know this, it seems that I can never be quite certain about anything else. (*Meditations*: 36)

The problem with the truth rule was the supposed possibility that our consciousness could seem to be clear and distinct when it is not, because either (a) God, or (b) the imperfection of our cognitive capacities could deceive us. To solve this problem Descartes aims to dissolve the deceiver doubt by showing both that God exists, or is not merely an idea, and that God is not a deceiver (cf. *Meditations*: 36).

If God exists, then he is the cause of us. Descartes thinks this shows that our cognitive capacities, specifically our capacity to judge, are perfect. This rules out the possibility of deception due to the imperfection of our capacity to judge.²⁷ Furthermore, if God exists and he is not a deceiver, this rules out the possibility of deception by God. And as a result, if our consciousness *seems to be* clear and distinct, it *actually is* clear and distinct and so is able to ground rational knowledge. In this case, Descartes would have succeeded in vindicating the truth rule.

The argument for the existence of God runs roughly as follows: ‘By the light of nature’ or the capacity to judge or rationally know²⁸ we know the causal principle (cf. *Meditations*: 40). This

²⁷ As we saw, Descartes characterizes the capacity to judge as composed of the intellect and the will (cf. n.10). He explains further that in so far as the will only affirms what is clearly and distinctly perceived, the capacity to judge will yield only (formally) true judgements, i.e. judgements based on clear and distinct consciousness are knowledge, so that our capacity to judge is perfect or a capacity to know with regard to such judgements. However, as free, the will is able to affirm (or deny) whatever is perceived by the intellect, whether or not it is perceived clearly and distinctly, so that the capacity to judge can also yield (formally) false judgements. Consequently, judgements on the basis of obscure and confused consciousness are not knowledge, so that our capacity to judge is imperfect or a fallible capacity to know with regard to judgements in general (cf. *Meditations*: 59/60).

²⁸ Descartes identifies ‘the natural light’ with ‘the capacity to judge or rationally know’ (cf. *Principles*: §30).

principle states that “there must be at least as much reality in the efficient and total cause as in the effect of that cause.” (*Meditations*: 40) Applying this principle to the idea of God, we can see that God must exist as the cause of our idea of God, because only God can have the degree of reality required to cause the idea of God as infinite and perfect (cf. *Meditations*: 42/3, 45/6, 50-3).^{29, 30}

Descartes writes:

I recognize that it would be impossible for me to exist with the kind of nature I have – that is having within me the idea of God – were it not the case that God really existed. By ‘God’ I mean the very being the idea of whom is within me, that is, the possessor of all the perfections [...], who is subject to no defect whatsoever. It is clear enough from this that he cannot be a deceiver, since it is manifest by the natural light that all fraud and deception depend on some defect. (*Meditations*: 52)

Accordingly, the consideration against God being a deceiver is the following: Deception is a limitation or imperfection. But my consciousness of God includes consciousness of the fact that God is infinite or perfect, so that he cannot have any limitation or imperfection. Consequently, God cannot be a deceiver (cf. *Meditations*: 52/3).³¹

Since God exists and is not a deceiver, the deceiver doubt is dissolved, so that Descartes can conclude that ‘whatever I perceive [i.e. am conscious of] very clearly and distinctly is true’. That is, he takes himself to have vindicated the truth rule and thus shown how rational knowledge can extend beyond the cogito (cf. *Meditations*: 54, 59/60, 70). Accordingly, he writes, at the end of the Fifth Meditations:

²⁹ Descartes reasons as follows: The cause of an idea must have at least as much formal reality as the idea has objective reality (cf. §4). The idea of God has maximal objective reality, because it is the idea of the infinite, perfect being. Nothing but God himself can be the cause of our idea of God, because nothing but God could have the degree of formal reality required to cause our idea of God. Hence, since we possess the idea of God, i.e. God possesses objective reality, God must exist, i.e. God must possess formal reality.

³⁰ In the Fifth Meditation Descartes proves the existence of God by means of a version of the Ontological Argument (cf. *Meditations*: 65-7). However, this argument relies on the truth rule being vindicated, thus relying on his earlier argument for the existence of God from the Third Meditation (cf. n.29).

³¹ Annette Baier suggests, in a humanist vein, that we might understand Descartes as arguing that, since the idea of God as infinite, perfect thinker is the perfection of ourselves as finite, imperfect thinkers, i.e. since he is what we aspire to be, God could not be a deceiver, unless deception is something we aspire to (cf. Baier 1986: 374). Putting Descartes’ considerations in this way brings out the manner in which Descartes’ idea of God might differ from the idea of the traditional God of Christianity. For a superb reconstruction of Descartes’ argument in the Third Meditation and discussion of his potential humanism, see Baier (1986).

[T]he certainty and truth of all knowledge depends uniquely on my awareness of the true God, to such an extent that I was incapable of perfect knowledge about anything else until I became aware of him. And now it is possible for me to achieve full and certain knowledge of countless matters (*Meditations*: 71).

In having outlined Descartes' vindication of the truth rule, I have completed my answer to the third of our five questions: Descartes aims to vindicate the truth rule by appealing to the innate ideas of God and the causal principle in order to extend rational knowledge beyond the cogito.

6. Descartes' failure to vindicate the truth rule

Here, I argue that, since Descartes fails to vindicate the idea of substance and the causal principle as certain, he fails to vindicate the truth rule. This answers our fourth question whether Descartes' account of knowledge lives up to his own standard of certainty, at least for knowledge beyond the cogito, in the negative. Nevertheless, I highlight what I call the *principle of self-consciousness* as the central and abiding insight of Descartes' investigation.

I want to begin by setting aside a common objection to Descartes' vindication of the truth rule, namely the so-called 'Cartesian Circle'. This objection asserts that, for ideas such as the idea of substance and the causal principle to be known 'by the light of nature' means that our consciousness of these ideas must be clear and distinct. But if these ideas are known because our consciousness of them seems to be clear and distinct, then any account that seeks to vindicate the truth rule by drawing on these ideas simply presupposes what it aims to vindicate, namely the truth rule (cf. *O&R*: 125, 214). The account would thus beg the question.

However, there is an interpretation that avoids this objection. Instead of taking Descartes to claim that the ideas that are known 'by the light of nature' are known because our *consciousness of them seems to be clear and distinct*, we can instead read him as claiming that these ideas are

known because, like the idea of ourselves being finite thinkers and the idea of God, *consciousness of them is included in the consciousness that grounds the cogito*, i.e. they are innate.³²

In line with this, my objection to Descartes is that, since he fails to vindicate the idea of substance and the causal principle as included in the consciousness that grounds the cogito, he fails to vindicate those ideas as certain. And, since he relies on these uncertain ideas to establish the truth rule, he fails to vindicate the truth rule and thus the account of knowledge based on it as certain, so that his attempt to establish the possibility of knowledge beyond the cogito fails.

6.1. The uncertainty of the idea of substance

While my reconstruction of Descartes' vindication of the truth rule made no appeal to the idea of substance, Descartes himself does conceive of the elements in that argument, specifically ourselves as finite thinkers and God, qua infinite thinker, as substances (cf. §4). I here want to show that Descartes is unable to vindicate the idea of substance as certain. This will enable me to argue, in the next sub-section, that Descartes' conception of the vindication of the truth rule in terms of the uncertain idea of substance explains his specific conception of the causal principle, whose uncertainty in turn underlies his failure to vindicate the truth rule.

According to Descartes, the idea of *substance* is the idea of “a thing which exists in such a way as to depend on no other thing for its existence” (*Principles*: §51; cf. *O&R*: 161 & 226).³³ That is, a substance is a self-sufficient entity. We already saw that for Descartes the cogito is not just the judgement ‘I think’, but the judgement ‘I think, therefore I am’ or ‘I am, I exist’, and that he interprets the ‘I am’ as expressing the idea, included in our consciousness of our act of thinking, of

³² For this reading, see e.g. Baier (1986: 365)

³³ Descartes goes on, in the *Principles*, to distinguish different kinds of substance, which are organized in a hierarchy of ontological dependence: God is the highest substance that depends on no other substance for its existence, thinking and extended substances depend only on God for their existence, and attributes and qualities of thinking and extension depend on thinking and extended substances respectively (cf. *Principles*: §§51/2).

ourselves being thinking substances (cf. §3). That is, our consciousness of our act of thinking includes consciousness of an instance of the idea of substance, namely thinking substance. And, since consciousness of an instance of an idea includes consciousness of the idea itself, our consciousness of our act of thinking includes consciousness of the idea of substance.

That Descartes takes the idea of substance to be thus included in our consciousness of our act of thinking, as what grounds the cogito, is also suggested by his writing that: “My understanding what a thing is [...] seems to derive simply from my own nature.” (*Meditations*: 38; cf. 44/5) Since, ‘a thing’ is a substance and ‘our nature’ is thinking, he seems to claim that the idea of substance (‘my understanding of a thing’) is included in our consciousness of our act of thinking as characteristic of our nature as thinking things.

However, it is not clear how the idea of substance could be included in the consciousness that grounds the cogito. It is true that our consciousness of our act of thinking does not depend on anything but our act of thinking, i.e. that it is self-sufficient. However, it is not obvious that our consciousness of our act of thinking includes consciousness of ‘a thing’, i.e. of some entity.

The consciousness that grounds the cogito is merely consciousness of our act of thinking, which includes that act of thinking. That is, it is a self-conscious act, expressible as ‘I think (cogito)’, where the ‘I’ expresses the self-conscious nature of the thinking as a self-thinking, rather than a thinking of a self (cf. §3). To interpret this act as a quality³⁴ that necessarily has some extant agent or bearer, i.e. as being indicative of a thing or substance, as is expressed in ‘I think, therefore I am’, is to presuppose the concept of substance, qua bearer of acts. Put differently, it is to interpret the ‘I’, not merely as expressing the self-conscious nature of the act, i.e. as thinking’s self-thinking, but as referring to the extant bearer of the quality of thinking, i.e. a thinking thing or substance.³⁵

³⁴ I am here taking quality in a very abstract sense, in which an act can be the quality of its agent as a substance.

³⁵ A related thought is expressed by Lichtenberg, who writes: “*It thinks*, one should say, as one says: *it thunders*. To say *cogito* is already too much, as soon as one translates it as *I think*. To assume the *I*, to postulate it, is a practical

However, there is nothing included in our consciousness of our act of thinking itself that provides for the move from consciousness of thinking, qua act, to consciousness of a thinking thing, qua substance (bearing that act as a quality). This move only becomes intelligible against the background of the reciprocal concepts of substance and quality as, on the one hand, a thing which exists on its own account that is the bearer of qualities, and, on the other hand, qualities as depending on and being borne by substances.³⁶ For, only against this background can we take the act of thinking that we are conscious of in the consciousness that grounds the cogito to be a quality borne by a substance, thereby taking ourselves to exist as a thinking thing or substance.^{37, 38}

We can bring out more clearly what underlies this objection to Descartes' claim that the consciousness that grounds the cogito includes consciousness of ourselves as a thinking substance, by entertaining the following response to it: It is true that all we are conscious of in the consciousness that grounds the cogito is our act of thinking, but, as we saw, the concept of an act immediately implies the concept of a capacity for (or agent of) that act (cf. §3). All that Descartes is doing is formulating this insight in terms of the reciprocal concepts of quality and substance, rather than the reciprocal concepts of act and capacity (or agent), but his meaning is the same.

Responding to this rebuttal brings out the underlying point of my objection. While it is true that both <act> and <capacity> as well as <quality> and <substance> are reciprocal concepts, the distinction between <act> and <capacity> is of merely logical import, while, for Descartes, the

requirement.” (*Aufzeichnungen und Aphorismen*: K76, my translation) Unlike Lichtenberg, I object to a specific understanding of the ‘I’ in I think, rather than the ‘I’ itself. That is, like Lichtenberg, I object to the ‘I’ expressing the existence of a substantial agent that does the thinking, but, unlike Lichtenberg, I suggest that the ‘I’ does express the self-consciousness of the act of thinking.

³⁶ Two concepts are reciprocal if and only if the articulation of either of them must make reference to the other (cf. *Meditations*: 66/7).

³⁷ For an argument that our consciousness of our act of thinking includes the idea of substance that has the shape that I am here criticizing, see e.g. Baier (1986: 365).

³⁸ For Descartes, of course, thinking is not just some quality of thinking substances alongside others, but it is their ‘principal attribute’, i.e. the quality that is characteristic of a thinking substance as such (cf. *Principles*: §53).

distinction between <quality> and <substance> is of ontological import. To see this, we have to understand what it means for two ideas or concepts to be logically or ontologically distinct.

Here is what I take to be the relevant ideas:

[LOGICAL DIFFERENCE] Two ideas are merely logically distinct (i.e. distinct in thought) if and only if consciousness of either of their contents is impossible without, as such, including (at least implicit) consciousness of the content of the other, i.e. if and only if they are two aspects of one and the same cognitive act. For instance, <bachelor> and <unmarried man> are merely logically distinct.

[ONTOLOGICAL DIFFERENCE] Two ideas are ontologically distinct (i.e. distinct in reality) if and only if consciousness of either of their contents is possible without, as such, including (at least implicit) consciousness of the content of the other, i.e. if and only if they are two distinct cognitive acts. For instance, <square> and <circle> are ontologically distinct.

On this understanding, <capacity> and <act> are merely logically distinct because consciousness of an act, as such, is (at least implicit) consciousness of a capacity for that act, and consciousness of a capacity, as such, is (at least implicit) consciousness of the act it is a capacity for, so that the two ideas are two aspects of one and the same act of consciousness. For instance, in being conscious of my act of swimming, as such, I am (at least implicitly) conscious of my capacity to swim, as the capacity my swimming is an act of, and in being conscious of my capacity to swim, as such, I am (at least implicitly) conscious of acts of swimming, as instances of the kind of act my capacity to swim is a capacity for.³⁹

According to Descartes, however, <substance> and <quality> are not merely logically, but ontologically, distinct. For, he claims that we are conscious of a substance only indirectly by means of consciousness of its qualities: He writes:

The only idea we have of a substance itself [...] is that it is the thing in which whatever we perceive (or whatever has objective being in one of our ideas) [i.e. what we are conscious of] exists. (*O&R*: 161)

[W]e cannot initially become aware of a substance merely through its being an existing thing, since this alone does not itself have any effect on us. We can, however, easily come to know a substance by one of its attributes, in virtue of the common notion that nothingness possesses no attributes, that is to say, no properties or qualities. Thus, if we perceive the presence of some attribute, we can infer that there must also be present an existing thing or substance to which it may be attributed. (*Principles*: §52)

³⁹ It is this thought that we relied on for the minimal, logical interpretation of ‘therefore I am’ or ‘I am, I exist’ in §3.

Descartes here explains that we understand a substance as that in which what we are conscious of, namely attributes or qualities, exist, rather than as something that we can be conscious of, in being conscious of those attributes or qualities. But, if we cannot be conscious of ourselves as a thinking substance ‘through its [i.e. that substance’s] being an existing thing’, i.e. through our existing thinkingly, then our consciousness of ourselves as a thinking substance is external to and independent of the consciousness of our thinking that includes our thinking, so that <substance> is not included in the consciousness that is the basis of the cogito.

This reading is bolstered by Descartes’ acknowledgement that the only way to be conscious of a substance, and thus of <substance>, on the basis of our consciousness of our act of thinking, qua consciousness of the attribute of thinking, is by ‘inferring’ consciousness of a thinking substance, and thus <substance>, from that consciousness in light of the ‘common notion that nothingness possesses no attributes’. However, ‘nothingness possesses no attributes’ just means ‘somethingness possesses attributes’, which just is the concept of substance as an extant thing that bears qualities. Descartes thus seems to infer our being a thinking substance, and thus <substance>, from our consciousness of our act of thinking in light of the idea of substance. On this conception <substance> is not included in the consciousness that grounds the cogito, but is external to and independent of that consciousness as an idea that is required to become conscious of specific substances on the basis of consciousness of their qualities. This renders <substance> uncertain.

Here is what is included in our consciousness of our act of thinking: In being conscious of our act of thinking, expressible in the cogito, ‘I think’, we are conscious of the distinction between <subject>, instantiated by ‘I’, and <predicate>, instantiated by ‘think’. This is a logical distinction because it is impossible to be conscious of a subject without (at least implicitly) being conscious of a predicate, and vice versa. After all, any consciousness is consciousness of something being some way, thus (at least implicitly) including the logical distinction between a subject – something

that can be some way – and a predicate – a way for something to be. In being conscious of our act of thinking, expressible in the cogito, ‘I think’, we furthermore understand the subject, ‘I’, to refer to ourselves, about whom all we know is that we are thinkers, and the predicate, ‘think’, to refer to our act of thinking. Thus, all that is included in the consciousness that grounds the cogito is consciousness of our act of thinking that, as such, includes (at least implicit) consciousness of ourselves as being thinkers and thus as possessors of the capacity to think, thereby furnishing us with the logical distinction between <capacity> and <act> (cf. §3).

Descartes, however, takes this merely logical distinction between <subject> or <capacity> and <predicate> or <act> and equates it with what, for him, is an ontological distinction between <substance> and <quality>. This equation is evident, when he explains: “*Substance*. This term applies to every thing in which whatever we perceive [i.e. what we are conscious of] immediately resides, as in a subject, or to every thing by means of which whatever we perceive exists.” (*O&R*: 161) Descartes thus equates the logical subject – that of which what we are conscious of is predicated – with an ontological substance – that in which what we are conscious of exists. It is only by means of this illicit equation that Descartes can claim that <substance> is certain because it is internal to and not independent of the consciousness that grounds the cogito.

To summarize: Descartes claims both (1) that <substance> is included in our consciousness of thinking, i.e. that <substance> and <thinking> are two aspects of one and the same cognitive act; and (2) that we are conscious of a substance only indirectly by means of an inference from consciousness of its qualities and <substance>, i.e. that <substance> is a distinct cognitive act from <thinking>. The manifest contradiction between these two claims remains occluded to Descartes because he identifies (i) the logical concept of subject, which is internal to and not independent of our consciousness of thinking, with (ii) the ontological concept of substance, which, for him, is

something we can only be conscious of in a cognitive act distinct from our consciousness of its qualities, i.e. which is external to and independent of our consciousness of thinking.

This objection to Descartes' claim that the consciousness that grounds the cogito includes <substance> raises the following question: Why does Descartes fail to realize that there is a distinction between logical concepts, such as <subject> and <predicate>, and ontological concepts, such as <substance> and <quality>, as he understands them?

I submit that Descartes fails to realize that there is a distinction between logical and ontological concepts because this distinction is a manifestation of the revolutionary metaphysical distinction between mind and world that Descartes' epistemological project first inaugurates. Descartes' equation of <subject> and <substance> is unproblematic within the metaphysical framework of Scholasticism, where there is no metaphysical distinction between subjects as the contents of consciousness and substances as elements of reality. However, on the modern metaphysical framework, inaugurated by Descartes, subjects and substances belong to two distinct spheres of reality whose relation becomes the central problem of modern philosophy (cf. §4). Descartes himself does not fully appreciate the revolutionary metaphysical consequences of his project, leading him to, on the one hand, break with the metaphysics of Scholasticism in instituting the distinction between mind and world, while, on the other hand, retaining a Scholastic understanding of central philosophical concepts, such as <subject> and <substance>.⁴⁰

The fact that <substance> is external to and independent of the consciousness that grounds the cogito undermines the ontological implications that Descartes aims to draw from his foundational

⁴⁰ The fact that Descartes himself does not seem to fully appreciate the revolutionary metaphysical consequences of his epistemological project is also apparent in the manner in which he replies to the problem of mind-body dualism. His critics observe that Descartes' epistemological project seems to entail an irreconcilable metaphysical split between mind and body. However, Descartes' response to this objection seems to be the mere assertion that there is a 'substantial union' between mind and body (cf. *Meditations*: 81; *O&R*: 219). Again, this is a doctrine that is unproblematic in the Scholastic metaphysical framework, but that becomes unintelligible on the metaphysical framework inaugurated by Descartes himself.

judgement of metaphysics. It thus calls into question, not only his conclusions about our individual existence as thinking substances, but also the idea of an ontological hierarchy of infinite substance, finite substances, and attributes and qualities that underlies his account of the possibility of rational knowledge beyond the cogito (cf. *Principles*: §§51/2; cf. n.32). This is the issue I turn to now.

6.2. *The uncertainty of the causal principle*

As I noted, to interpret Descartes's vindication of the truth rule as avoiding the Cartesian circle, we need to read him as claiming that the causal principle is innate (cf. §6). Accordingly, we need an explanation of how consciousness of the causal principle might be included in our consciousness of our act of thinking that grounds the cogito.

Here is a possible explanation: Our consciousness of our act of thinking includes consciousness of our act of thinking as the cause of that very consciousness. Hence, our consciousness of our act of thinking includes consciousness *of* our-act-of-thinking-causing-our-consciousness-of-that-act-of-thinking.⁴¹ Therefore, our consciousness of our act of thinking includes consciousness of our thinking as instantiating the causal principle. And, since consciousness of an instance of the causal principle includes consciousness of the principle itself, our consciousness of our act of thinking includes consciousness of the causal principle.

While this account is appealing, it does not fit the text. For, as Descartes states it, the causal principle speaks of an efficient cause: “there must be at least as much reality in the *efficient* and total *cause* as in the effect of that cause” (*Meditations*: 40, my emphasis). An *efficient cause* is something that causes something else. That is, in efficient causation the cause is *external to and independent of* the effect. For instance, water is external to and independent of the dissolution of salt that it causes. The causal principle thus comes to this:

[EFFICIENT CAUSAL PRINCIPLE] In efficient causation the effect has something else as its cause.

⁴¹ For a reading of the vindication of the causal principle along these lines, see e.g. Baier (1986: 363-5).

But given what we know about the cogito, our act of thinking cannot be the efficient cause of our consciousness of that act of thinking; so the efficient causal principle cannot be instantiated by our thinking. If our thinking instantiated efficient causation it would have to consist in two independent cognitive acts: (i) consciousness of our act of thinking, which includes consciousness *of our-act-of-thinking-as-the-cause-of-our-consciousness*; and (ii) our act of thinking, where the latter efficiently causes the former.

But this would undermine the characteristic certainty of the cogito. For, if our thinking consisted in two independent cognitive acts, then it would be possible for the cause of our consciousness *of our-act-of-thinking-as-the-cause-of-our-consciousness* to *merely seem to be* our act of thinking, because the cause of our consciousness *of our-act-of-thinking-as-the-cause-of-our-consciousness* could *be* either (a) an omnipotent God, or (b) the imperfection of our cognitive capacities, so that we would merely seem to be conscious *of our-act-of-thinking-as-the-cause-of-our-consciousness* when that consciousness is actually caused by something other than our act of thinking. That is, the cogito would be vulnerable to the deceiver doubt (cf. §2).

However, we know that the cogito is certain because, in virtue of the self-consciousness of thought, the cogito does not depend on an act of thinking that is external to and independent of the consciousness of that act of thinking. That is, it is impossible that consciousness of our act of thinking is consciousness that merely seems to be of our act of thinking. For our consciousness of our act of thinking, as the act of thinking it is, is not something external to or independent of that act of thinking; there could not be that consciousness if there were not the act of which it is consciousness. Put simply, in thinking that we think, we think (cf. §3).

Consequently, our thinking does not instantiate the efficient causal principle, so that consciousness of that principle cannot be included in the consciousness that grounds the cogito. But, if consciousness of the efficient causal principle is not thus included in that consciousness,

then it is not certain. This means that a crucial claim on which the certainty of Descartes' account of the possibility of knowledge depends fails to live up to his key constraint of certainty. This undermines his account by his own standards.

This answers our fourth question: Descartes fails to vindicate the idea of substance and the causal principle as certain, so that, since he relies on these uncertain ideas to establish the truth rule, he fails to vindicate the truth rule, and thus the account of knowledge beyond the cogito based on them, as certain. That is, the execution of his epistemological project fails by falling short of certainty as the constraint he himself has revealed for it.⁴²

6.3. *The principle of self-consciousness*

Before concluding, I want to briefly respond to our fifth question by noting what remains of Descartes' account of knowledge. For, although the idea of substance and the efficient causal principle are not certain, there still is, implicit in Descartes' reflection on the cogito, an idea of causation that is certain.

As we saw, the cogito is certain because of the self-consciousness of thought: because in being conscious of our thinking, we are thinking. As such, our thinking instantiates what we might call *self-causation*. In self-causation the cause is internal to and not independent of the effect. For instance, an act of thinking is internal to and not independent of the consciousness of the act of thinking that it causes. The associated causal principle thus comes to this:

[PRINCIPLE OF SELF-CAUSATION] In self-causation the effect has itself as its cause.

Insofar as this principle is instantiated by our thinking, we might call it the *principle of self-consciousness*, which states:

⁴² Hegel seems to be in agreement with this diagnosis of Descartes' shortcomings, saying: "[T]he determinate representations, the content [of thought; e.g. the idea of substance and the causal principle], were not derived from the understanding [i.e. with certainty], but rather picked up in an empirical manner [i.e. uncertain]." (*VLGP III*: 126, my translation; cf. 138 & 144-5)

[PRINCIPLE OF SELF-CONSCIOUSNESS] Our consciousness of our act of thinking has itself, qua act of thinking, as its cause.

Hence, while Descartes is wrong to think that the efficient causal principle he exploits is instantiated in our thinking, he is on the right track. For there is a principle of causation that is instantiated in our thinking, namely the principle of self-causation or self-consciousness.⁴³

This raises two questions: First, why does Descartes himself appeal to efficient causation, rather than self-causation? And second, can the principle of self-consciousness save Descartes' account of the possibility of knowledge beyond the cogito?

On the first question: We saw that, since our consciousness of our act of thinking includes consciousness of ourselves finite thinkers, it must also include consciousness of the infinite thinker. Furthermore, we saw that this was due to the logical principle, instantiated in that same consciousness, that privative concepts depend on the corresponding non-privative ones (cf. §5). Accordingly, our consciousness of our act of thinking includes consciousness of our thinking as instantiating the principle that an idea depends on or is caused by an idea of equal or greater reality. This is an application of a logical principle, namely the *principle of sufficient reason* (PSR), which states:

[PRINCIPLE OF SUFFICIENT REASON] Everything must have a sufficient cause.

However, PSR is not yet Descartes' efficient causal principle, for both the efficient causal principle and the principle of self-consciousness qualify as instances of PSR. The reason why Descartes interprets PSR as the efficient causal principle, rather than as the principle of self-

⁴³ In the First Replies, Descartes acknowledges something like the principle of self-causation, arguing that God must be the cause of himself (cf. *O&R*: 108-111). However, Descartes maintains that, while such a self-cause is not 'different from its effect', it is still 'analogous to an efficient cause' (cf. *O&R*: 108, 109). Accordingly, he illustrates God's causation of himself by analogy with God's preservation of finite substances, rather than, for instance, by analogy with thought's causation of consciousness of itself (cf. *O&R*: 109-11). This suggests that, while Descartes sees the need for something like the principle of self-causation, he manages only to conceive of it by analogy with efficient causation, rather than, for instance, the self-consciousness of thought, thus failing to explicitly articulate the principle of self-causation. In the Fourth Replies, Descartes seems to further acknowledge, at least in the case of God, the inadequacy of conceiving of self-causation by analogy with efficient causation (cf. *O&R*: 235-45).

consciousness, lies in his claim that the consciousness that grounds the cogito includes consciousness of ourselves as thinking substances (cf. §6.1).

For, on the basis of this claim, Descartes interprets our consciousness of ourselves as finite thinkers as consciousness of ourselves as finite thinking substances. Given this interpretation, our consciousness of our act of thinking includes consciousness of a finite thinking substance depending on or being caused by the infinite thinking substance. That is, it includes consciousness that one substance, God, efficiently causes another substance, ourselves, so that PSR, qua logical principle, comes to imply the efficient causal principle, qua ontological principle.

<Infinite thinking> and <finite thinking> are merely logically distinct because, in accordance with PSR, consciousness of finite thinking, as such, includes (at least implicit) consciousness of infinite thinking, and vice versa, i.e. they are two aspects of one and the same cognitive act, namely consciousness of our act of thinking.

By contrast, <infinite substance> and <finite substance> are, according to Descartes, ontologically distinct. He writes: “[T]he term ‘substance’ does not apply *univocally*, as they say in the Schools, to God and to other things; that is, there is no distinctly intelligible meaning of the term which is common to God and his creatures.” (*Principles*: §51) Now, since the meaning of a term is the idea expressed by that term, if there is no meaning common to the terms ‘God’, qua infinite substance, and ‘creature’, qua finite substance, then <infinite substance> and <finite substance> are two distinct ideas or cognitive acts, i.e. they are ontologically distinct.⁴⁴

The reason why Descartes takes the consciousness that grounds the cogito to include consciousness of the efficient causal principle, rather than the principle of self-consciousness, thus is his false equation of the logical concept of subject with the ontological concept of substance. It

⁴⁴ Here Descartes is explicit about this metaphysical claim being one that has its origin in the metaphysical framework of ‘the Schools’ (cf. §6.1).

is this equation that leads him to falsely equate the merely logical distinction between <finite thinking> and <infinite thinking> with the ontological distinction between <finite substance> and <infinite substance>. And this equation leads him to interpret the causal principle included in our consciousness of our act of thinking, and expressed generally by PSR, as the efficient causal principle, rather than the principle of self-consciousness.

If we deny that the consciousness that grounds the cogito includes consciousness of ourselves as thinking substances, as I have argued we must, then rather than interpreting PSR as the efficient causal principle, we can and should interpret it as the principle of self-consciousness. However, even though Descartes is right to claim that our consciousness of our act of thinking includes a causal principle, namely the principle of self-consciousness, this principle cannot save his account of the possibility of knowledge beyond the cogito.

We saw that that account draws on the efficient causal principle to vindicate the truth rule (cf. §5). Simply substituting the certain principle of self-consciousness for the uncertain efficient causal principle does not save this account. As we just saw, the principle of self-consciousness is a logical principle, while the efficient causal principle is an ontological principle. But, Descartes' vindication of the truth rule depends on his proof of the *existence* of God, which in turn depends on the efficient causal principle, qua *ontological* principle.

However, while the principle of self-consciousness cannot save Descartes' account of knowledge, in arriving at it by means of Descartes' reflections on the cogito, we have still gained the following valuable epistemological insight: Since our consciousness of our act of thinking includes consciousness that the cogito is knowledge, we can be conscious of an act of knowing. In being conscious of this act of knowing, as such, we can be conscious of a capacity to know, which is exercised in that act of knowing. So in this act, we can be conscious of ourselves as possessing

a capacity in virtue of which we are knowers, if only with respect to the cogito. This, I suggest, is the central and abiding insight of Descartes' account of knowledge.

7. Conclusion

The upshot of this chapter is twofold: Positively, reflection on the cogito has shown that our capacity to judge, in virtue of its self-consciousness, is a capacity to know, if only with regard to the cogito: *we are knowers*. Negatively, our investigation has revealed that by appeal to the self-consciousness of judgement alone we cannot know anything beyond the cogito: *self-consciousness by itself is empty*.

The positive upshot implies that since our capacity to judge is self-conscious, we should be able to further articulate the consciousness that we have of this capacity in judgement in order to determine the extent to which it might still be a capacity to know beyond the cogito. Doing this is the task of the rest of this dissertation.

The negative upshot implies that, since we can judge beyond the cogito, there must be some source other than our capacity to judge that gives that capacity its cognitive content. In line with this consideration, the next chapter investigates the modern empiricist alternative to Descartes' account of knowledge. Specifically, the empiricist claims (a) that all cognitive content is given by operations of the senses, (b) that the operations of the senses present mind-independent things, and (c) that the sensory given can thus vindicate empirical judgements as knowledge.

II. THE EMPIRICIST GIVEN

The blindness of the senses

Hume presupposed the Lockean principle of experience, but followed it more consistently; Hume sublated [i.e. abolished] objectivity, as the being in and for itself of the determinations of thought. (*VLGP III*: 281, my translation)

1. Introduction

The previous chapter of this dissertation showed that while we can, by appeal to the self-consciousness of judgement alone, vindicate our capacity to judge as a capacity to know the cogito, we cannot thereby vindicate it as a capacity to know anything beyond the cogito. Specifically, we cannot vindicate it as a capacity to know mind-independent reality. However, since we can make judgements that seem to be about mind-independent reality, there must be some source other than our capacity to judge, from which it receives cognitive content.

Accordingly, this chapter examines the modern empiricist alternative to Descartes' account of knowledge: specifically, the empiricist doctrines (a) that all cognitive content is given by operations of the senses, (b) that, when all goes well¹, the receptive operations of the senses by themselves present mind-independent objects, and (c) that the sensory given can thus vindicate empirical judgements as knowledge. The chapter shows why these claims are simultaneously attractive and problematic. The attraction of empiricism lies in its idea that, when all goes well, the receptive operations of the senses by themselves present mind-independent objects to us, so that it seems obvious that a way for our judgements to be knowledge of mind-independent reality is for them to agree with the mind-independent objects that our senses present to us when all goes well. The problem of empiricism ultimately consists in the insight that it is impossible, by appeal to the operations of the senses by themselves, to understand these operations as able to even seem to

¹ This qualification is meant to indicate the absence of any unfavorable conditions, such as great distance, misleading lighting, etc. (cf. Ch. I.2).

present anything, thus undermining the intelligibility of empiricism as an account not only of empirical knowledge, but even of judgement.

In what follows, I consider modern empiricism as an alternative to Cartesian epistemology that, like Descartes, rejects the Scholastic doctrine of sensible species; but, unlike him, retains a version of the peripatetic axiom.² I specifically reconstruct Locke's and Hume's accounts of empirical knowledge, in which I trace a problem regarding the ability of empiricism to entitle itself to the conception of something mind-independent.³ I argue that, while already implicit in Locke, this problem is only fully explicit in Hume, who sees that it undermines the ability of empiricism to account for knowledge of mind-independent reality, leading to skepticism about the possibility of such knowledge. I go on to argue that Kant sees that Hume's insight undermines, not only the ability of empiricism to account for knowledge of mind-independent reality, but also more radically its ability to account for operations of the senses as able to even seem to present anything, so that it leads to skepticism about the possibility of judgement. Faced with this more radical problem, I contend that Kant resolves to overcome empiricism in favor of a more adequate transcendental account of judgement and empirical knowledge, developed in the *Critique of Pure Reason*.

I proceed in four steps: I begin by outlining modern empiricism in relation to Descartes' epistemological project, thus motivating it as an account that promises the vindication of our capacity to judge as a capacity to know mind-independent reality beyond the cogito (§2). Against this general background, I trace the problem facing modern empiricism in Locke and Hume. I argue that, though aware of it to some degree, Locke largely ignores the problem's implications (§3), so that only in Hume do they come into full focus as the central driver of his infamous skepticism regarding the possibility of an empiricist account of our supposed knowledge of mind-independent

² This is what Hegel at the top of this chapter calls 'the principle of experience'.

³ This is what Hegel describes as 'Hume sublat[ing] [i.e. abolishing] objectivity'.

reality (§4). Lastly, I contend that Kant sees that the problem facing empiricism entails not only Hume's epistemic skepticism, but also more fundamentally skepticism regarding the possibility of an empiricist account of our ability to make judgements that seem to be about mind-independent reality; this leads Kant to seek a non-empiricist basis for his account of judgement and knowledge of mind-independent reality (§5). I conclude by summarizing my findings (§6).

2. The empiricist alternative to Cartesian epistemology

I begin in this section by outlining and motivating modern empiricism in relation to the Cartesian epistemological project that was the topic of the previous chapter.

What makes modern empiricism 'modern' is that it follows Descartes in rejecting the Scholastic doctrine of *sensible species* (cf. Ch.I.4). That is, instead of taking sensory consciousness to be constituted by the sensible actualities of empirical objects being actualized in the senses, qua receptive capacity, in virtue of those objects affecting the senses, qua material organs, modern empiricism, like Descartes, takes sensory consciousness to be constituted by ideas that at least seem to present us with mind-independent objects (cf. *Meditations*: 37/8; *Essay*: II.i §§1-3; *Treatise*: 1/2).

What makes modern empiricism 'empiricism' is that it rejects innate ideas, which Descartes alleged to be included in the consciousness that grounds the cogito (cf. *Meditations*: 37/8; Ch. I.5; *Essay*: I.; *Treatise*: 158, 160). Instead, it embraces a version of the *peripatetic axiom*, which states that any content of consciousness derives originally from operations of the senses (cf. Ch. I.4). I call the modern empiricist version of the peripatetic axiom the *semantic thesis* of empiricism (cf. *Essay*: II.i. §§1 & 2; *Treatise*: 4, 7):

[SEMANTIC THESIS] All cognitive content is given by operations of the senses.⁴

⁴ While modern empiricism acknowledges that there is non-empirical consciousness of conceptual relations, which is the basis of logical judgements, and for some authors mathematical judgements, it holds that such cognitive content is still ultimately dependent on there being empirical concepts that display the conceptual relations that constitute the content of this kind of consciousness.

As we saw, Descartes invokes innate ideas in an attempt to vindicate the certainty of our judgements as knowledge, i.e. to vindicate the thought that our consciousness does not merely seem to present some reality, but actually presents that reality (cf. Ch. I.5). By contrast, modern empiricism appeals to the receptivity of operations of the senses by themselves to vindicate the certainty of at least some of our empirical judgements.

The principal thought of modern empiricism is that sensory affection furnishes us with simple ideas, which are qualitatively differentiated states of sensory consciousness, and which, when all goes well, at least indirectly present sensible qualities of mind-independent objects. These simple ideas are *simple* because they cannot be analyzed into any further constituent ideas, thus making them the basic constituents of sensory consciousness. When all goes well, such simple ideas at least indirectly *present sensible qualities of mind-independent objects*, because they are immediately received through sensory affection, so that due to their purely receptive character they are necessarily reflective of something other than the consciousness that they constitute, i.e. they present a mind-independent reality (cf. *Essay*: II.viii. §§17 & 23, xxx. §2, xxxi. §2, xxxii. §§14-6 IV.iv. §4; *Treatise*: 190).⁵

According to modern empiricism these simple ideas are combined into sensory consciousness that presents mind-independent objects by the imagination or understanding. However, unlike Descartes and in line with the semantic thesis, modern empiricism holds that, when all goes well, these combinatory operations do not alter the simple ideas given by operations of the senses by themselves, but merely consolidate collections of simple ideas of sensible qualities of mind-independent objects into complex ideas of mind-independent objects (cf. Ch. I.2; *Essay*: II.ix §6;

⁵ Of course, modern empiricism holds that only ideas of primary qualities, like extension, shape, etc. are necessarily veridical of a mind-independent reality, while ideas of secondary qualities, like color, sound, smell, etc., are the effects that certain primary qualities produce in us (cf. n.12).

Treatise: 10). Such an operation might, for instance, consolidate the collection of simple ideas of redness, roundness, and firmness, into the complex idea of an apple.

According to modern empiricism, when all goes well, operations of the senses by themselves thus yield sensory consciousness that at least indirectly presents mind-independent objects. I call this the *givenness thesis* of empiricism:

[GIVENNESS THESIS] When all goes well operations of the senses *by themselves* yield sensory consciousness that at least indirectly presents mind-independent objects.

The givenness thesis entails that, when all goes well, the sensory consciousness that our empirical judgements are based on does not *merely seem* to present mind-independent objects, but *actually* at least indirectly presents mind-independent objects, so that our empirical judgements are certain, i.e. knowledge. I call this the *epistemic thesis* of empiricism:

[EPISTEMIC THESIS] When all goes well sensory consciousness vindicates empirical judgements as knowledge.

Together the semantic thesis, the givenness thesis, and the epistemic thesis constitute the core tenets of modern empiricism as an alternative to Cartesian epistemology. As we saw, Descartes failed to vindicate our capacity to judge as a capacity to know beyond the cogito by appeal to certain allegedly innate ideas, because he failed to vindicate those ideas as certain (cf. Ch. I.6). Furthermore, we saw that even Descartes acknowledged that operations of the senses by themselves are open only to the limited unfavorable conditions doubt, so that, when all goes well, simple sensory ideas are certain (cf. Ch. I.2 & 4).⁶ The attraction of modern empiricism thus consists in its rejection of innate ideas (semantic thesis) and its claim that the receptive operations of the senses by themselves can constitute a sensory consciousness (givenness thesis) that can ground our knowledge (epistemic thesis). The ensuing epistemological project of modern empiricism consists

⁶ Unlike modern empiricism Descartes, of course, does not think that simple sensory ideas by themselves seem to present sensible qualities of mind-independent objects; instead, he holds that for such ideas to seem to present something mind-independent they must first be unified by the imagination and understanding (cf. n.10).

in investigating the extent to which, on the basis of the empiricist resources I have outlined, our capacity to judge is a capacity to know (cf. *Essay*: I.i. §§4, 6 & 7).

While modern empiricism thus constitutes a break with the way in which Descartes seeks to vindicate our capacity to judge as a capacity to know, it remains an attempt at executing the same general epistemological project by different means. This is evidenced by the fact that proponents of modern empiricism, like Descartes, both (a) draw on the self-consciousness of our capacity to judge to investigate the extent to which this capacity is a capacity to know; and (b) conceive of their investigation as foundational to science, i.e. as first philosophy.⁷ By drawing on self-consciousness modern epistemology aims to give an account of knowledge that each of us can apply to ourselves as rational beings, thereby enabling us to vindicate the status as knowledge of those of our judgements that are knowledge. As first philosophy modern epistemology's account of knowledge cannot presuppose any of our judgements to be knowledge, for it is its very aim to vindicate our having any such knowledge.^{8, 9}

⁷ On the first point, Locke describes his task as the 'understanding making itself its own object', thus suggesting that his investigation draws on the self-consciousness of our capacity to judge (cf. *Essay*: I.i. §1); while Hume describes his method as a 'mental geography' that consists in the observation of the operations of our minds to discover the "secret springs and principles, by which the human mind is actuated in its operations" (*Enquiry*: 14; cf. 13). On the second point, Locke's aim in the *Essay* is to determine the extent to which our capacity to judge is a capacity to know, so that we might be able to settle disputes riddling the sciences (cf. *Essay*: Epistle to the Reader, I.i. §§4, 6 & 7); while Hume takes the 'science of man', which is the topic of his *Treatise*, to be the foundation of all other sciences or human knowledge (*Treatise*: xvi).

⁸ Barry Stroud explains this characteristic feature of epistemology as first philosophy as follows: "What we seek in the philosophical theory of knowledge is an account that is completely general in several respects. We want to understand how any knowledge at all is possible – how anything we currently accept amounts to knowledge. Or less ambitiously, we want to understand with complete generality how we come to know anything in a certain specified domain [e.g. the empirical domain]." (Stroud 1989 [2000]: 101) "The demand for completely general understanding of knowledge is a certain domain requires that we see ourselves at the outset as not knowing anything in that domain and then coming to have such knowledge on the basis of some independent and in that sense prior knowledge" (Stroud 1989 [2000]: 120).

⁹ Unlike modern epistemology, most contemporary epistemology does not conceive of itself as first philosophy, drawing not merely on our self-consciousness, but also on the findings of the empirical sciences to give an account of knowledge that we can apply to humans as a kind of sentient being. That is, unlike modern epistemology, contemporary epistemology does not aim to vindicate our judgements as knowledge without presupposing any of our judgements to be knowledge (cf. n.34).

3. Locke and the problem of empiricism

Having outlined and motivated modern empiricism as an account that promises to vindicate the possibility of knowledge of mind-independent reality, I here turn to Locke's *Essay Concerning Human Understanding* to further substantiate this account and to begin to identify a key problem that it faces.

Locke expresses his empiricism as follows: "Let us suppose the mind to be, as we say, white paper void of all characters, without any *ideas*; how comes it to be furnished? [...] From *experience*: In that, all our knowledge is founded." (*Essay*: II.i. §§1 & 2) Here, 'experience' means sensory affection, which according to Locke affords us simple 'ideas' (or more specifically simple *sensations*). *Ideas* are "whatsoever is the *object* of the understanding when a man thinks [...] whatever it is, which the mind can be employ'd about in thinking", where thinking includes (among other things) enjoying sensory consciousness (*Essay*: I.i. §8; cf. II.i. §1 & II.ix §1).

Locke conceives of sensory consciousness as indirectly presenting the sensible qualities of mind-independent objects (cf. *Essay*: II.i. §3, II. v.). The reason for this is that Locke thinks that sensory affections simultaneously afford us: (i) qualitatively differentiated states of sensory consciousness, i.e. *affections of consciousness* (cf. *Essay*: II.ii. §1, II.iii.); and (ii) consciousness of those states *as* effects of sensory affection, i.e. *consciousness of affection* (cf. *Essay*: IV.xi. §9). The latter implies that there must be *something* other than our sensory consciousness that affects our senses and that has the power to produce the relevant qualitatively differentiated states of sensory consciousness in us.¹⁰ For Locke, this legitimates the thought that these states of sensory

¹⁰ We can find a similar thought in Descartes' Sixth Meditation, where he writes: "[T]here is in me a passive faculty of sensory perception, that is, a faculty for *receiving* and *recognizing* the ideas of sensible objects" (*Meditations*: 79, my emphasis). Like Locke, Descartes takes the 'faculty of sensory perception' both (i) to 'receive' ideas, i.e. to afford states of sensory consciousness; and (ii) to 'recognize' ideas, i.e. to be conscious of those states as effects of sensory affection by something (cf. *Meditations*: 79/80). However, Descartes holds that our capacity or 'faculty' for 'sensory perception' essentially involves our capacity to judge (*Meditations*: 78; *Discourse*: 37; cf. n.6). Consequently, he conceives of the senses as a cognitive capacity whose intelligibility depends on its relation to our capacity to judge, while Locke conceives of the senses as a cognitive capacity intelligible independently of our capacity to judge. We

consciousness are caused by the sensible qualities of the something that affects our senses, which he assumes to be mind-independent reality, thus in effect endorsing metaphysical realism (cf. *Essay* II.i. §§2 & 3).¹¹ Accordingly, Locke claims that (at least some of) the states of sensory consciousness resemble and thus indirectly present or signify, their causes, i.e. sensible qualities of mind-independent objects. So they are simple ideas that indirectly present the sensible qualities of such objects because (at least some of) the states of sensory consciousness resemble such qualities.¹² Furthermore, collections of such simple ideas or ‘complex ideas’¹³ indirectly present mind-independent objects, by indirectly presenting collections of sensible qualities that are attributed to supposed mind-independent objects or ‘substances’ in the content of sensory consciousness (cf. *Essay*: II.xxiii. §1 & xxx. §5).¹⁴

This line of thought gains plausibility due to the fact that our lived perceptual consciousness, which constitutes the data to be explained by Locke’s empiricist account, always already seems to present mind-independent objects bearing sensible qualities. Accordingly, considered phenomenologically, i.e. from the perspective of lived perceptual consciousness, we have no

will see that the problem of empiricism is in effect the result of wanting to retain Descartes’ characterization of what our senses afford us, while jettisoning the thought that the senses are intelligible as a cognitive capacity only in relation to our capacity to judge (cf. Ch. III).

¹¹ I take ‘metaphysical realism’ to be the assumption that a mind-independent reality exists.

¹² Specifically, ideas of *primary qualities* resemble, and thus indirectly present, the sensible qualities of mind-independent objects; while ideas of *secondary qualities* are our mind’s subjective response to affection by certain sensible qualities of mind-independent objects (cf. *Essay*: II.viii., xxx. §2).

¹³ By ‘complex ideas’ I mean Locke’s “*complex ideas of substances*”, to which I restrict my discussion (*Essay*: II.xxiii).

¹⁴ Locke distinguishes between simple and complex ideas (cf. *Essay*: II.ii. §§1 & 2). *Simple ideas*, which are passively received presentations of individual determinate sensible qualities, like the ideas of hardness, coldness, motion etc., are the basic kind of ideas, which cannot be analyzed into any further constituent ideas and are necessarily reflective of reality (cf. *Essay*: II.viii. §§17 & 23, xxx. §2, xxxi. §2, xxxii. §§14-6 IV.iv. §4). *Complex ideas* are complex presentations of collections of simple ideas that are attributed to supposed mind-independent objects or ‘substances’ in the content of sensory consciousness. There are ‘real’ and ‘fantastical’ complex ideas (*Essay*: II. xxx. §5). The former are formed from multiple simple (or complex) ideas by passive sensory or merely formal intellectual processes and thus present reality, like the ideas of lead or a man, an army etc. The latter are formed from multiple simple (or complex) ideas by active or substantial intellectual processes and thus at least in part present the intellect’s own activity, like the idea of a centaur (cf. *Essay*: II. xii. & xxx. §5).

immediate consciousness that consists of mere states of sensory consciousness, but always already seem to be conscious of mind-independent objects bearing sensible qualities.

According to Locke, our ideas can afford us *general and abstract ideas* by undergoing a merely formal¹⁵ intellectual process of abstraction. This process leaves out the spatio-temporal context and differences of the particular ideas, while isolating similarities between them, conjoining the product of this process with a general term that expresses the relevant general and abstract idea (cf. *Essay*: II.xi. §9, III.iii. §8). These general and abstract ideas in effect amount to *concepts*. For example, we leave out the differences of color and spatio-temporal context between yesterday's complex idea of a Granny Smith and today's complex idea of a Gala to form the general and abstract idea <apple> expressed by the term 'apple'.

For Locke, we make judgements about mind-independent reality by relating ideas that indirectly present sensible qualities and the mind-independent objects bearing those qualities. These empirical judgements are vindicated as knowledge of mind-independent reality – which Locke calls *sensitive knowledge*¹⁶ – if our sensory consciousness is (at least in part) constituted by corresponding and equivalently related ideas (cf. *Essay*: IV.ii. §14).¹⁷ For instance, an empirical judgement to the effect of 'this ice is cold' is knowledge if our sensory consciousness is (at least in part) constituted by the complex idea of some ice and the simple idea of coldness, where the latter is related to the former as quality to substance bearing that quality.

¹⁵ By the qualification 'merely formal' I mean to indicate that, in accordance with the semantic thesis of empiricism, the intellectual process of abstraction is supposed not to alter the content of the idea (cf. §2).

¹⁶ Locke recognizes two further kinds of knowledge: *Intuitive knowledge*, which is the immediate consciousness of agreement or disagreement of ideas; and *demonstrative knowledge*, which is the step wise consciousness of agreement and disagreement of ideas mediated by various acts of intuitive knowledge (cf. *Essay*: IV.ii §§1-7).

¹⁷ While Locke acknowledges that ideas may merely seem to be sensory, while they really are e.g. dreamt or hallucinated, he insists that there are subjectively available criteria by means of which we are able to tell the difference between a genuine sensory idea and a merely dreamt or hallucinated one, so that the condition in the main text is both necessary and sufficient for sensitive knowledge (cf. *Essay*: IV.ii. §14).

However, Locke's doctrine that ideas indirectly present the sensible qualities of mind-independent objects – because our states of sensory consciousness resemble (at least some of) the sensible qualities of the mind-independent objects that cause those states by affecting our senses – raises the following question: How is this resemblance given to us, i.e. how do we know that there is this resemblance between what empiricism posits to be immediate sensory consciousness (namely qualitatively differentiated states of sensory consciousness) and mind-independent reality (or its sensible qualities)? This question is important, since it is our presumed knowledge that (at least some of) the states of sensory consciousness resemble the sensible qualities of mind-independent objects that enables us to understand them as simple sensory ideas that indirectly present the sensible qualities of mind-independent objects that affect our senses, thereby explaining our sensory affections as affording us sensory consciousness that at least indirectly presents mind-independent reality.

A plausible answer to this question is the following: The states of sensory consciousness that empiricism posits as constituting our immediate sensory consciousness raise the question what causes these states and how are they related to their cause. Locke seems to think that – in line with his metaphysical realism – the best answer to this question is given by invoking a conception of something mind-independent, which includes (amongst further concepts) the concepts of substance and causation. A conception of *something mind-independent* is a conception of a spatio-temporally unified and persisting bearer of sensible qualities that exists independently of affecting our senses but is in principle able to affect them. It is thus a conception of something that is the causal ground of indefinitely many possible states of sensory consciousness, which as the effects of that thing's sensible qualities affecting our senses can be predicted and altered in line with our conception of that thing, given various further facts (e.g. how that thing's sensible qualities affect our senses under certain conditions etc.). Accordingly, a grasp of a conception of something mind-

independent allows us to conceive of (at least some of) the states of sensory consciousness that according to empiricism constitute our immediate sensory consciousness as resembling the sensible qualities of the mind-independent objects which cause them by affecting our senses (cf. *Essay*: II.viii. §§7 & 8). Locke thus invokes a conception of something mind-independent in order to explain the posited states of sensory consciousness as indirectly presenting the sensible qualities of the mind-independent objects that affect our senses, by resembling (at least some of) those qualities. In other words, his answer to the question ‘What causes the states of sensory consciousness that constitute our immediate sensory consciousness and how are they related to their cause?’ is that those states are caused by our senses being affected by mind-independent objects, (at least some of) whose sensible qualities they resemble and thus indirectly present.

As we saw, Locke seems to take himself to be entitled to a conception of something mind-independent, because he thinks that sensory affection affords us consciousness of states of sensory consciousness *as* effects of sensory affection by something, which he takes to be mind-independent reality. It is, however, not clear that Locke is entitled to a conception of something mind-independent on the basis of the resources of empiricism. After all, empiricism claims, in accordance with its semantic thesis, that all cognitive content, including concepts of mind-independent reality, such as a conception of something mind-independent, is given by operations of the senses. However, given the contrast between what sensory affection alone affords us according to empiricism – namely qualitatively differentiated states of sensory consciousness dependent on sensory affection – and what a conception of something mind-independent consists in – namely the concept of a spatio-temporally persistent thing, existing independently of its affecting the senses – sensory affection alone cannot provide the content of a conception of something mind-independent (or of the concepts of substance and causation implicated in it). Hence, on the basis of the resources available to him as an empiricist, Locke is not entitled to the conception of something

mind-independent that he invokes to give his account of our supposed knowledge of mind-independent reality. This is what I call the *problem of empiricism*:

[PROBLEM OF EMPIRICISM] With the resources of empiricism, we cannot understand ourselves as entitled to a conception of something mind-independent.

Locke in fact realizes that a conception of something mind-independent cannot be empirically vindicated, i.e. that there are no sensory ideas from which it can be abstracted in accordance with the semantic thesis. For Locke this conception thus is a ‘supposition’, necessary to explain our lived perceptual consciousness, through which we have no immediate access to the mere states of sensory consciousness posited by modern empiricism, but which instead seems to present mind-independent objects bearing sensible qualities. For Locke, the concept of substance, which in part constitutes our conception of something mind-independent, is an ‘obscure’ and ‘relative’ indispensable place-holder for the unknown, i.e. it is the necessary conception of the ‘something’ that enables us to understand the posited states of sensory consciousness as being the basis of our lived perceptual consciousness, which seems to present mind-independent objects bearing sensible qualities (cf. *Essay* II.xxiii. §§1, 2, 4 & 16, IV.xi. §9). Locke writes: “[N]ot imagining how these simple *Ideas* can subsist by themselves, we accustom our selves, to suppose some *Substratum*, wherein they do subsist, and from which they result, which therefore we call *Substance*.” (*Essay* II.xxiii. §1)¹⁸

Accordingly, Locke’s supposition of a conception of something mind-independent is, at least in his eyes, vindicated as the best explanation of our lived perceptual consciousness, because it explains how the mere states of sensory consciousness posited by empiricism can indirectly present mind-independent objects bearing sensible qualities.¹⁹ Since this explanation goes beyond what

¹⁸ The nature of Locke’s conception of something mind-independent thus agrees with Descartes’ concept of substance in that the content of both is something that, while not itself apprehensible through consciousness of qualities, must be posited as the underlying bearer of any qualities (cf. Ch. I.6.1).

¹⁹ That Locke’s epistemology takes the shape of an inference to the best explanation is, of course, no coincidence, but a consequence of his application of the methodology of the new empirical sciences – which proceed in this manner –

according to empiricism constitutes immediate sensory consciousness, namely qualitatively differentiated states of sensory consciousness, our sensory consciousness of mind-independent objects bearing sensible qualities is mediated or indirect, i.e. our immediate states of sensory consciousness are understood as the effects of sensory affection by the sensible qualities of mind-independent objects in virtue of being understood in terms of a supposed conception of something mind-independent. This conception of something mind-independent is thus an assumption that, while it enables Locke's empiricist account of our sensory consciousness of mind-independent objects and the knowledge of mind-independent reality dependent on it, cannot itself be vindicated on the basis of the resources available to him as an empiricist, so that Locke ultimately fails to provide a properly empiricist account of our knowledge of mind-independent reality.²⁰

4. Hume's Insight and Hume's Puzzle

In this section, I outline Hume's explicit diagnosis of the problem of empiricism and sketch the skeptical implications for an empiricist account of knowledge that he draws from this.

Unlike Locke, Hume distinguishes two kinds of *sensory* 'perceptions of the human mind' as the effects of sensory affection: impressions and sensory ideas (cf. *Treatise*: 1).²¹ He distinguishes these by their respective 'force and liveliness', claiming that impressions, which he associates with the feeling of present sensory affection, are more forceful and lively than sensory ideas, which he

to the philosophical investigation of our human understanding. Hume explicitly notes this as a mark of empiricism or 'experimental philosophy' in his Introduction to the *Treatise* (cf. *Treatise*: xx-xxi).

²⁰ Locke dismisses Descartes' account of knowledge, which supposes concepts like <substance> to be innate, on the ground that appeal to such ideas constitutes an implausible account of the origin of such concepts, presenting empiricism as an alternative and superior explanation of this (cf. *Essay*: I). However, given the problem of empiricism that I have outlined Locke's empiricism cannot as such provide any alternative account of our entitlement to <substance>, so that it in effect falls short of its stated ambition, suffering from the same shortcoming for which it criticizes the Cartesian account.

²¹ Hume, like Locke, distinguishes between *sensory* perceptions and *reflective* perceptions, with the former resulting from sensory operations and the latter from operations of the understanding (cf. *Essay*: II.i. §2; *Treatise*: 7/8). Since my focus is on sensory perceptions, I continue to abstract from reflective perceptions.

associates with memories of past sensory affection (cf. *Treatise*: 1-3 & *Enquiry*: 18).²² Hume contends that every simple sensory idea is preceded and thus caused by a simple impression; ideas represent the sensory qualities that the impressions seem to present by resembling them in all but their force and liveliness (cf. *Treatise*: 3/4 & 37; *Enquiry*: 19).^{23, 24}

This might suggest that, unlike Locke, Hume avoids describing impressions (or sensory affection) as presenting anything. Instead, one might suspect that Hume takes impressions to be non-intentional states of sensory consciousness, while conceiving of ideas as resembling copies of these non-intentional impressions which thus indirectly present those impressions. However, this is not the case. Instead, Hume conceives of simple impressions themselves as *seeming* to present sensible qualities of mind-independent objects (cf. *Treatise*: 19; *Abstract*: 647).

The reason for this is the following: Similarly to Locke, Hume takes impressions to simultaneously be (i) qualitatively differentiated states of sensory consciousness i.e. *affections of consciousness*, and (ii) consciousness of those states as effects of sensory affection, i.e. *consciousness of affection* (cf. *Treatise*: 192, 366).²⁵ However, unlike Locke, Hume claims that the “ultimate cause” from which these impressions arise is “perfectly inexplicable by human reason”, i.e. that their cause is unknowable to us (*Treatise*: 84). Accordingly, he is more careful than Locke, claiming that impressions arise “from unknown causes”, rather than presupposing that they arise

²² Hume distinguishes between simple impressions and ideas and complex impressions and ideas. Simple and complex impressions as well as simple ideas are passively received, while complex ideas can be actively constructed by means of imaginative combination of simple ideas (cf. *Enquiry*: 19).

²³ Accordingly, the distinction between impressions and sensory ideas is one in intensity of qualitative character, rather than qualitative character itself.

²⁴ Hume notes that this does not hold with the same universality for complex impressions and ideas, i.e. there may be complex impressions that are too complex for us to be able to form or retain a corresponding complex idea, and there may be, for example, complex ideas that result from the imaginary combination of simple ideas, of which we have no corresponding complex impression (cf. *Treatise*: 3 & *Enquiry*: 19).

²⁵ That impressions include consciousness of affection is suggested by the very term ‘impression’, which suggests the pressing-in-of-something on the subject, thus pointing to the notion of something distinct from the subject that impresses itself onto it.

from affection by mind-independent reality, i.e. unlike Locke, he does not assume metaphysical realism (*Treatise*: 7; cf. xviii, 67; *Enquiry*: 153).

That said, Hume claims that simple impressions, like redness, firmness, roundness, etc., are the kinds of items, like color, extension, shape, etc., that would be the sensible qualities of mind-independent objects, if there were such objects. Consequently, he takes simple impressions to (indirectly) present sensible qualities that may be the sensible qualities of mind-independent objects, so that our simple impressions *seem to present* the sensible qualities of mind-independent objects, instead of, as in Locke's case, *actually presenting* (at least some) such qualities.²⁶ Accordingly, Hume regards collections of simple impressions or complex impressions as (indirectly) presenting collections of sensible qualities that seem to be the sensible qualities of mind-independent objects (cf. *Treatise*: 16). Furthermore, attaching a general term, say 'red', to an idea allows that idea to figure as a 'general idea' or concept, like <red> (cf. *Enquiry*: 17-25).²⁷ Thus, for example, a collection of simple impressions, like redness, firmness, roundness, etc., (indirectly) present a collection of sensible qualities which seem to be the sensible qualities of a mind-independent object, the idea or concept of which we express by means of the term 'apple'. In line with this, Hume describes sensory impressions as "the images of external objects conveyed by our senses" (*Abstract*: 647).

As in Locke, the motivation for this picture seems to be that our lived perceptual consciousness, which Hume aims to explain by means of empiricism, always already seems to present mind-independent objects bearing sensible qualities. That is, considered phenomenologically we have no immediate access to any mere impressions as qualitatively differentiated states that constitute

²⁶ That impressions at least seem to present sensible qualities of mind-independent objects is also evident from Hume's equating 'an object appearing to the senses', i.e. a sensory presentation, with 'an impression being present to the mind', i.e. the occurrence of an impression (cf. *Treatise*: 19).

²⁷ Hume thinks that particular ideas can – through their annexation to general terms – be "general in their representation", i.e. figure as concepts (*Treatise*: 22).

immediate sensory consciousness, but instead always already seem to be conscious of mind-independent objects bearing certain sensible qualities. Hence our lived perceptual consciousness seems to vindicate Hume's thesis regarding our impressions seeming to present the sensible qualities of mind-independent objects and thus mediately those objects.

In accordance with the semantic thesis of empiricism, Hume holds that for any supposed concept to have cognitive content, i.e. to be a concept at all, it must derive its cognitive content from impressions. He writes:

When we entertain [...], any suspicion that a philosophical term [which purports to express a concept] is employed without any meaning or idea [...], we need but enquire, *from what impression is that supposed idea derived?* And if it be impossible to assign any, this will serve to confirm our suspicion. (*Enquiry*: 22)

Hume contends that in order to confirm whether a 'term' expresses a cognitively contentful idea or concept, we must first identify the idea connected to that term as its 'meaning' or cognitive content, and then identify the impression that corresponds to that idea as its cause. This impression then is the source of the cognitive content of that idea and thus of the associated term's expressing a concept. The semantic thesis thus entails that, if there is a term whose supposed cognitive content is an idea that lacks any corresponding impression, then there is no concept expressed by that term: it is empty and at best *merely seems* to have cognitive content (cf. *Treatise*: 65 & 74/5; *Abstract*: 648/9).

It is Hume's rigorous application of the semantic thesis that leads him to explicitly diagnose the problem of empiricism. He argues that neither the supposed idea attached to the term 'substance', nor the supposed idea attached to the term 'causation', which both seem to have cognitive content, have corresponding sensory impressions. Consequently, he contends that the resources of empiricism cannot enable us to vindicate these supposed concepts as having any cognitive content, so that the terms 'substance' and 'causation' are empty, i.e. do not express concepts (*Treatise*: 16,

87-92 & 219-222). In what follows, I restrict the discussion (in the main text) to <substance>, but Hume presents a parallel argument for <causation> (sketched throughout in the footnotes).

Hume defines <substance> as “*something that may exist by itself*”, i.e. as something that involves supposed ideas of an object’s continuous existence independently of sensory affection (*Treatise*: 233). However, according to empiricism, our senses only ever provide us with an intermittent series of complex impressions that are collections of states of sensory consciousness that depend on sensory affection. Hence, instead of a simple impression of substance we only have complex impressions seemingly presenting collections of sensible qualities of which we are not in a position to know whether or not they are the sensible qualities of objects that exist independently of our sensory affection, i.e. whether the complex impressions actually present the sensible qualities of mind-independent objects. Given that nothing in sensory consciousness could provide cognitive content to a supposed idea of something that continues to exist independently of one or a series of our momentary impressions, there is no impression of something continuing to exist independently of these impressions (cf. *Treatise*: 67, 187-9). Hume writes: “We have therefore no idea [and thus no meaningful concept] of substance, distinct from that of a collection of particular qualities, nor have we any other meaning when we either talk or reason concerning it.” (*Treatise*: 16; cf. 219) That is, the resources of empiricism cannot enable us to vindicate <substance> as cognitively contentful. This is what I call Hume’s Insight regarding substance, which applies *mutatis mutandis* to <causation>:²⁸

²⁸ Hume contends that the problem with the supposed concept of causation is that it involves the supposed idea of a necessary connection between two kinds of events, but our senses only ever provide us with a finite number of cases of an event of one kind actually being succeeded by an event of another kind. Hence, instead of a simple impression of necessary connection between one kind of impression and another kind we only have complex ideas of the past constant conjunction of particular kinds of impressions. Given that nothing in sensory consciousness could provide content to a supposed idea of one impression necessarily being connected to another, there is no impression of causation between impressions. Hume writes: “From the mere repetition of any past impressions, even to infinity, there never will arise any new original idea [and thus no meaningful concept], such as that of a necessary connexion” (*Treatise*: 88; cf. 91/2).

[HUME'S INSIGHT] With the resources of empiricism, we cannot understand ourselves as entitled to certain concepts, such as <substance> and <causation>, which are essential to a conception of something mind-independent.

Hume goes on to provide an account of why the supposed concepts of substance and causation, and thus the conception of something mind-independent, seem to be cognitively contentful. Hume argues that the ideas attached to <substance> and <causation> reflect subjective ingrained mental habits of associating impressions (cf. *Treatise*: 265-7; *Abstract*: 657; *Enquiry*: 75). That is, <substance> and <causation> are projections of our imagination on to what our impressions seem to present, thereby making them seem to present qualities of *substances* that stand in *causal relations* (cf. *Treatise*: 165-8, 265-7, 657; *Enquiry*: 75). Regarding <substance> Hume writes:

[T]he imagination is apt to feign something unknown and invisible, which it supposes to continue the same under all these variations [of sensory consciousness]; and this unintelligible something it calls a *substance* (*Treatise*: 220).

[H]aving never discover'd any of these sensible qualities, where [...] we did not likewise fancy [i.e. imagine] a substance to exist; the same habit, which makes us infer a connexion between cause and effect, makes us here infer a dependence of every quality on the unknown substance. (*Treatise*: 222)²⁹

In accordance with the epistemic thesis of empiricism, Hume, like Locke, holds that judgements about mind-independent reality would be knowledge of mind-independent reality, if our sensory consciousness was (at least in part) constituted by impressions that correspond to and are related in a way that corresponds to the ideas or concepts constituting the relevant judgement.^{30, 31}

²⁹ Regarding <causation> Hume writes: “[N]ecessity is something, that exists in the mind [i.e. the imagination], not in objects; nor is it possible for us ever to form the most distant idea of it, considered as a quality in bodies. [...] [T]he necessity [...], which unites causes and effects, lies in the determination of the mind to pass from the one to the other.” (*Treatise*: 165/6) “[T]he mind [i.e. the imagination] has a great propensity to spread itself on external objects, and to conjoin with them any internal impression, which they occasion, and which always make their appearance at the same time that these objects discover themselves to the senses.” (*Treatise*: 167)

³⁰ Hume calls this supposed empirical knowledge *knowledge of matter of fact*, and distinguishes knowledge based on ‘perception’, i.e. sensory consciousness that seems to present the sensible qualities of mind-independent objects, from knowledge based on ‘empirical reasoning’, i.e. perceptually based inference (*Treatise*: 73; cf. 70-5 & *Enquiry*: 25-7).

³¹ Apart from supposed empirical knowledge, Hume acknowledges the possibility of rational knowledge about conceptual relations, which he calls *knowledge of relations of ideas* (cf. *Enquiry*: 25). Judgements about conceptual relations are vindicated as knowledge of conceptual relations solely by the character of the ideas or concepts that figure in their formation; as such they are transparently true, i.e. in making a judgement about conceptual relations the contrary judgement is recognized to be inconceivable. Hume argues that such transparently true judgements are vindicated either by *intuition*, i.e. immediate rational apprehension, as in the case of judgements like ‘A is identical with A’; or by *demonstration*, i.e. inferentially mediated rational apprehension, as in the case of judgements like ‘if all As are C and B is an A, then B is C’ (cf. *Treatise*: 70-5 & *Enquiry*: 25-7).

However, the implication of Hume's Insight is that the resources of empiricism cannot enable us to vindicate our empirical judgements about mind-independent reality as knowledge. Hume thus makes explicit a shortcoming that, as we noted, is already implicit in Locke (cf. §3).

<Substance> and <causation> are constituent concepts of the conception of something mind-independent, i.e. of something that continues to *exist independently* of our impressions and is the *causal ground* of them. Hume notes that we require cognitively contentful concepts of substance and causation in order to be able to understand the sensible qualities that our impressions seem to present as the sensible qualities of objects that continue to *exist independently* of our impressions and that are the *causal ground* of them (cf. *Treatise*: 187-199, 211-7). He sees that it is only if we are entitled to attribute cognitive content to these concepts that we can understand the impressions that *seem to* present the sensible qualities of mind-independent objects and that constitute our sensory consciousness as *actually* presenting the sensible qualities of *mind-independent* objects, so that sensory consciousness can vindicate the claims to knowledge of our empirical judgements.³²

Hume's Insight shows that, with the resources of empiricism, we cannot entitle ourselves to attribute cognitive content to <substance> and <causation>. So from the perspective of empiricism, these concepts cannot inform our understanding of impressions in the requisite way. With <substance> and <causation> being mere projections of our imagination, rather than cognitively contentful concepts, our impressions can at best be understood to seem to present sensible qualities of what *merely seem* to be mind-independent objects. Put differently, since any empirical judgement about mind-independent objects is (at least in part) based on the subjective ingrained mental habits of the association of impressions that constitute the supposed concepts of substance

³² We saw the same insight show up in Locke's acknowledgement of the necessity of supposing a conception of something mind-independent in order to explain the mere states of sensory consciousness that our sensory consciousness consists of as resembling and thus presenting the sensible qualities of the mind-independent objects which allegedly cause them by affecting our senses (cf. §3).

and causation, our empirical judgements are at least in part judgements about mind-*dependent* objects.

Consequently, with the resources of empiricism, we cannot vindicate our empirical judgements as knowledge. Hume's Insight thus undermines the claims to knowledge of our empirical judgements about mind-independent objects, leading to a form of external world skepticism (cf. *Treatise*: 187, 218, 657). I call the skepticism resulting from Hume's Insight *Hume's Puzzle*:

[HUME'S PUZZLE] Since, with the resources of empiricism, we cannot understand ourselves as entitled to a conception of something mind-independent, how is it intelligible that the judgements we make, on the basis of what our sensory consciousness seems to present us with, are knowledge of a mind-independent reality?^{33, 34}

³³ Stroud argues that external world skepticism is the inevitable upshot of any epistemological reflections on empirical knowledge (cf. Stroud 1984a [2000]; 1989 [2000]). He writes: "The difficulty comes in philosophy when we try to see exactly how sense-perception works to give us knowledge of the world. [...] [T]he basic idea could be put by saying our knowledge is 'underdetermined' by whatever it is that we get through [...] 'the senses' [...]. Given the [...] sensory 'basis' of our knowledge, it does not follow that something we believe about the world around us is true. The problem is then to explain how we nevertheless know that what we believe about the world is in fact true. Given the apparent 'obstacle', how is our knowledge possible?" (Stroud 1984a [2000]: 6, 8; cf. 1989 [2000]: 105, 120/1). While Stroud's external world skepticism rests on the diagnosis that what the senses present is insufficient to vindicate the intelligibility of our having empirical knowledge, Hume's Puzzle rests on the more specific insight that what the senses present is insufficient to vindicate the intelligibility of our having a conception of something mind-independent, which in turn is necessary for vindicating the intelligibility of our having empirical knowledge. Hume's more specific insight is crucial to Kant's eventual radicalization of it (cf. §5).

³⁴ Hume's Puzzle is closely related to a puzzle articulated by Berkeley, which turns on the question: Since the senses merely seem to present mind-independent objects, how is it intelligible that our supposed concepts of mind-independent objects actually are about mind-independent objects, i.e. are objective? (cf. *Principles*: §§3/4) Hume's and Berkeley's Puzzles differ in their topic, but not in the reason for the puzzlement they express: Hume's Puzzle asks about the intelligibility of empirical judgements being knowledge, while Berkeley's Puzzle asks about the intelligibility of our supposed concepts of mind-independent objects being objective. And, the reason for the puzzlement about the intelligibility of each is the same, namely that the sensory given at best constitutes a subjective ground for empirical judgements or concepts of mind-independent objects, thus failing to vindicate them as knowledge or as objective.

Hume's and Berkeley's historical puzzles differ from what John Campbell and Quassim Cassam discuss under the heading of 'Berkeley's Puzzle': "[H]ow is it possible for us even to have concepts of mind-independent objects?" (Cassam 2011: 18; cf. Campbell & Cassam 2014). This difference results from the fact that Cassam and Campbell, unlike the modern empiricists, do not regard their epistemological projects as first philosophy (cf. §2, n.9). This comes out in the fact that they respond to 'Berkeley's Puzzle' by giving empirically informed accounts of the concept of something mind-independent that explain how it is possible for whatever our senses provide us with to present mind-independent objects as such. However, as empirically informed, their accounts beg the question against Hume's and Berkeley's Puzzles, which question the possibility of any empirical knowledge or concepts of mind-independent objects in the first place (cf. Cassam 2007: 33/4). Cassam says as much, stating: "The object of the exercise [i.e. epistemology] is simply to explain how perceptual knowledge is possible, *given* that it is possible." (Cassam 2007: 34, cf. 218/9) By contrast, Hume and Berkeley aim to vindicate the claim of our empirical judgements to knowledge and of our concepts to being of mind-independent objects without presupposing any specific empirical knowledge or concepts of mind-independent objects. This leads them to diagnose the impossibility, with the resources of empiricism, of giving an account of empirical knowledge or concepts of mind-independent objects that would explain how it is possible for the sensory given to actually present mind-independent objects, i.e. of providing a first philosophy. Hence, their accounts lead to a skepticism that questions the possibility of any empiricist understanding of empirical knowledge or concepts of mind-independent objects at all.

Hume's Puzzle calls into question the epistemic thesis of empiricism – that the sensory given can vindicate empirical judgements as knowledge. It does this as a result of explicating Hume's Insight, which is an implication of the semantic thesis of empiricism – that all cognitive content is given by operations of the senses. Hume thus brings out that empiricism cannot explain empirical judgements as knowledge.

Nevertheless, Hume notes that the uncertainty of the claim to knowledge of our empirical judgements about mind-independent reality, expressed by Hume's Puzzle, does not make those judgements *seem* less certain to us, i.e. they retain their appearance of being knowledge even in the presence of Hume's Insight. Accordingly, Hume argues that his insight does not have any effect on our propensity to regard those of our judgements about mind-independent reality that are suitably accompanied by impressions that seem to present the sensible qualities of mind-independent objects as knowledge. This manifests itself, for example, in the fact that Hume's Puzzle has no effect on the conduct of our everyday affairs, and from the standpoint of those affairs might strike us as rather silly. What is more, if we were to try to live the epistemic skepticism entailed by Hume's Insight, and expressed in Hume's Puzzle, so that we would refrain from making any empirical judgements about mind-independent reality that claim to be knowledge at all, Hume thinks, this would not be a livable attitude, but would inevitably lead to our demise (cf. *Treatise*: 269; *Enquiry*: 55 & 160).³⁵

Hume's predicament is thus that, on the one hand, we cannot vindicate our empirical judgements about mind-independent reality as knowledge; while, on the other hand, we cannot help but make

³⁵ Accordingly, Hume distinguishes *excessive skepticism* from *mitigated skepticism* regarding our knowledge of mind-independent reality (cf. *Enquiry*: 159 & 161). Excessive skepticism is the unlivable skepticism implied by Hume's Insight, and expressed in Hume's Puzzle, which claims that since we are unable to justify our supposed knowledge of mind-independent reality, we are unable to know that reality. Mitigated skepticism is that claim, but the strength of the skeptical conclusion – that we cannot know mind-independent reality – is mitigated by the insight into the impossibility of living this excessive skepticism and thus into its irrelevance for the purpose of everyday life. Hume's mitigated skepticism thus only comes into view against the background of the dual insight into excessive skepticism and the impossibility of living it (cf. *Enquiry*: 150 & 161/2).

those judgements and take them to be knowledge. All that we can do, Hume argues, is to give an account of what leads us to make the empirical judgements about mind-independent reality we must make and take to be knowledge, without, however, thereby vindicating them as knowledge.

Accordingly, he writes:

[T]he sceptic [...] must assent to the principle concerning the existence of body [i.e. the supposed concept of substance], tho' he cannot pretend by any argument of philosophy to maintain its veracity. Nature has not left this to his choice, and has doubtless esteem'd it an affair of too great importance to be trusted to our uncertain reasoning and speculations. We may well ask, *What causes induce us to believe in the existence of body?* But 'tis in vain to ask, *Whether there be body or not?* That is a point, which we must take for granted in all our reasonings. (*Treatise*: 187)

Overall, Hume sees that given the semantic thesis, which entails that the supposed concepts of substance and causation lack cognitive content, empiricism possesses insufficient resources to constitute an account of our capacity to judge as a capacity to know mind-independent reality. All that we can do is to give an account of the causes of our supposed empirical knowledge of mind-independent reality, without being able to thereby ever vindicate it as actual knowledge. Consequently, unlike Locke, Hume makes explicit that operations of the senses by themselves cannot be understood as providing the basis for knowledge of mind-independent reality, which – given his adherence to empiricism – entails the skepticism expressed by Hume's Puzzle.

5. Kant's Insight and Kant's Puzzle

Kant is explicit about the fact that a key motivation of his epistemological project in the *Critique of Pure Reason* is reflection on modern empiricism in general and on Hume in particular (cf. *KpV*: 52). In the *Prolegomena*, for example, he writes:

I openly confess that my remembering David Hume was the very thing that many years ago first interrupted my dogmatic slumber and gave my investigation in the field of speculative philosophy a quite new direction. I was far from following him in the conclusion to which he arrived by considering, not the whole of his problem, but a part, which by itself can give us no information. If we start from a well-founded, but undeveloped, thought which another has bequeathed to us, we may well hope by continued reflection to advance further than the acute man to whom we owe the first spark of light. (*Prolegomena*: 260; cf. *KrV*: A764/B792)

The 'well-founded, but undeveloped, thought' that Kant speaks of here is Hume's Insight that we cannot give an empiricist vindication of <substance> and <causation> (cf. *Prolegomena*: 257-60;

KpV: 50-2). As we saw, ‘the conclusion’ that Hume draws from this thought is the epistemic skepticism expressed in Hume’s Puzzle (cf. *KrV*: B19-20, B127-8, A765-7/B793-5; *KpV*: 52). While Kant lauds Hume’s Insight as a ‘well-founded thought’ and the ‘first spark of light’ that roused him from his ‘dogmatic slumber’ and prompted his work on the first *Critique*, he notes that this thought remained ‘undeveloped’ and failed to consider the ‘whole problem’ (cf. *KpV*: 52-3).

In what follows, I reconstruct how Kant ‘advances further’ than Hume by developing Hume’s Insight into what I call Kant’s Insight. In doing this, I do not so much reconstruct what Kant explicitly writes, but instead explicate the kind of understanding of empiricism in general and of Hume in particular that, while largely implicit, shapes Kant’s interpretation of empiricism. The resulting appreciation of Kant’s development of Hume’s Insight puts us in a position to better understand the precise manner in which Kant’s epistemological project constitutes an advance over empiricism, which will be the topic of the next chapter.

Before spelling it out in detail, let me briefly sketch the contours of Kant’s thought: Kant sees that Hume’s Insight does not only undermine the ability of empiricism to account for knowledge of mind-independent reality, leading to Hume’s Puzzle; but also and more disturbingly undermines the ability of empiricism to account for operations of the senses as able to so much as seem to present anything. It is this more radical finding that I call *Kant’s Insight*. Instead of the epistemic skepticism entailed by Hume’s Insight and expressed in Hume’s Puzzle, Kant’s Insight entails a more radical skepticism about the possibility even of judgement. I call the aporia that expresses this more radical skepticism *Kant’s Puzzle*.

Kant’s Insight is the result of the following considerations: As we saw, Locke and Hume both claim that sensory affection affords us not only (i) qualitatively differentiated states of sensory consciousness, i.e. *affection of consciousness*, but also (ii) consciousness of those states *as* effects of sensory affection, i.e. *consciousness of affection*. That is, sensory affection does not afford us

merely sensory consciousness made up of manifold states of sensory consciousness, but also affords us consciousness of those states as effects of sensory affection. Accordingly, Locke and Hume conceive of sensory consciousness, which is constituted by sensory affection, as having objective purport, namely as ideas or impressions that seem to present the sensible qualities of whatever affects our senses.

What Kant sees is that conceiving of sensory consciousness, which is constituted by sensory affection, as effects of sensory affection and thus as having objective purport requires an understanding of the concept of affection on our part, qua subjects of affection. That is, to be able to understand our states of consciousness *as* effects of sensory affection is to have a conception of affection, i.e. of one thing's causally influencing another thing (or itself as other). However, Kant sees further that <affection> is not intelligible independently of a conception of something mind-independent. For, to understand one thing's causally influencing another thing (or itself as other), requires us to understand what it is for there to be something that *exists independently* of sensory consciousness and that is the *causal ground* of the states constituting that consciousness, i.e. we must have a conception of something mind-independent.

However, Hume's Insight is that, with the resources of empiricism, we cannot entitle ourselves to a conception of something mind-independent. This entails that, since the intelligibility of <affection> depends on entitlement to such a conception, we cannot entitle ourselves to <affection> with the resources of empiricism. And, this in turn entails that, since the intelligibility of Locke's and Hume's conception of sensory consciousness as having objective purport depends on an entitlement to <affection>, we cannot, with the resources of empiricism, entitle ourselves to their claim that sensory affection affords us sensory consciousness that has objective purport.

What Kant thus sees is that, on the basis of the resources available to them, all Locke and Hume are entitled to claim that sensory affection affords us are mere qualitatively differentiated states of

sensory consciousness. This means that supposed ideas or impressions cannot even seem to present anything, i.e. sensory consciousness cannot even seem to have objective purport. This is Kant's

Insight:

[KANT'S INSIGHT]: If, with the resources of empiricism, we cannot understand ourselves as entitled to a conception of something mind-independent, then on the basis of those resources, we cannot understand our sensory consciousness as even seeming to present us with anything.

The empiricist assumption that sensory affection by itself affords us consciousness of states of sensory consciousness, which Kant's Insight reveals empiricism not to be entitled to, shows up in Hume as the assumption of the concept of quality. <Quality> allows Hume to conceive of our impressions, which are mere states of sensory consciousness, as (indirectly) presenting sensible *qualities* that possibly, but unknowably, are the sensible qualities of mind-independent objects, so that the impressions seem to present the sensible qualities of mind-independent objects. Hume reasons as follows: Simple impressions, like redness, firmness, roundness, etc., are items of a kind that would be sensible qualities of substances, if there were any substances. Since we do not know that there are not any substances, we are not in a position to know that these seeming sensible qualities of substances do not exist independently of sensory affection as actual sensible qualities of mind-independent objects. Thus, our inability to vindicate the supposed concept of substance, Hume thinks, leaves untouched a supposed ability on our part to enjoy impressions that seem to present the sensible qualities of mind-independent objects. Consequently, Hume thinks, falsely according to Kant, that we can understand our supposed concepts of mind-independent objects, like <apple>, i.e. the supposed content of sensory consciousness, in terms of collections of simple impressions, like redness, firmness, roundness etc., that seem to present the sensible qualities of mind-independent objects, like apples, *even though*, due to the emptiness of <substance>, we cannot vindicate them as actually presenting the sensible qualities of such objects. Hence, for Hume, while our supposed concepts of mind-independent objects cannot be understood as being of mind-

independent objects, they still can be understood as concepts of what seem to be such objects, but actually merely are collections of simple impressions that depend for their existence on sensory affection, i.e. we can understand our sensory consciousness as at least seeming to have objective purport (cf. *Treatise*: 16).

What Kant sees, and Hume misses, is that <quality> implies <substance>, because the two concepts are reciprocal or mutually dependent, i.e. Kant sees that we cannot understand, and thus be entitled to, one of these concepts without the other (cf. Ch. I.6.1). One does not understand what a substance is, if one does not understand that a substance is a bearer of qualities; and one does not understand what a quality is if one does not understand that a quality is a property of a substance: to be a substance is to be a bearer of qualities, while to be a quality is to be a property of a substance.³⁶ This conceptual reciprocity implies that Hume is not by his own lights entitled to claim that immediate sensory consciousness consists in simple impressions or states of sensory consciousness that (indirectly) present sensible *qualities* that possibly, but unknowably, are the sensible qualities of mind-independent objects, so that they seem to present the sensible qualities of mind-independent objects. After all, as Hume acknowledges, he is unable, with the resources of empiricism, to entitle himself to <substance>, so that, due to the conceptual reciprocity of <substance> and <quality>, he has just as little entitlement to <quality>. However, <quality> is required to understand sensory affection as affording simple impressions or states of sensory consciousness that seem to present sensible *qualities* of mind-independent objects. Consequently,

³⁶ The reciprocal nature of <substance> and <quality> is explicit in Kant. On the ‘Table of Categories’ under “Relation” we find in the *Prolegomena* “substance”, while in the same place in the first *Critique* we find “inherence and subsistence (substantia et accidens)” (*Prolegomena*: 303, cf. 310; *KrV*: A80/B106). Kant explains ‘inherence’ and ‘subsistence’ as what I have been calling ‘quality’ and ‘substance’, i.e. as a way for a substance to be, and as that substance being as such, respectively. He writes: “[I]f one ascribes a particular existence to this real [i.e. the accident] in substance (e.g. motion, as an accident of matter), then this existence is called “inherence,” in contrast to the existence of the substance, which is called “subsistence”.” (*KrV*: A186/B229-30) He further writes: “In regard to substance, however, they [i.e. its accidents] are not really subordinate to it, but are rather the way substance itself exists.” (*KrV*: A414/B441) Kant thus explains both <quality/inherence> and <substance/subsistence> as reciprocal aspects of the pure concept of ‘inherence and subsistence’ or ‘substance’.

Hume's Insight into the empirical ungroundedness of <substance>, and thereby <quality>, undermines his own conception of sensory affection as able to afford us simple impressions or states of sensory consciousness that seem to present sensible qualities of mind-independent objects, i.e. as affording us a sensory consciousness that seems to have objective purport. For, without an entitlement to <quality>, all that Hume is entitled to is the claim that sensory affection affords us mere qualitatively differentiated states of sensory consciousness, which do not even seem to present anything, i.e. have no objective purport.

In line with his more radical understanding of Hume's Insight, Kant claims that sensory affection by itself affords us mere sensations or qualitatively differentiated states of sensory consciousness. Thus, for Kant, operations of our senses by themselves afford us neither simple ideas that resemble and thus indirectly present the sensible qualities of mind-independent objects – as Locke argues – nor simple impressions that merely seem to present the sensible qualities of such objects – as Hume contends. Instead, for Kant, sensations, as such, are nothing but mere qualitatively differentiated states of sensory consciousness (cf. *KrV*: A19-20/B34). Sensations are thus states of sensory consciousness that are exhaustively characterizable by descriptions that relate them solely to us as a modification of our sensory consciousness, rather than by descriptions that mention anything beyond them (cf. B44, B207-8, A253/B309, A320/B376-7).³⁷

In addition to the questioning of the epistemic thesis of empiricism – the thesis that the sensory given can vindicate empirical judgements as knowledge – that is expressed in Hume's Puzzle, Kant sees that Hume's Insight, which results from the semantic thesis of empiricism – the thesis that all cognitive content is given by operations of the senses – implies Kant's Insight. Kant's Insight calls into question the givenness thesis – that when all goes well the operations of the senses *by*

³⁷ For a reading of Kant's conception of sensation along these lines, see Wilfrid Sellars (1968: Ch. I, esp. 9/10 & 23) and John McDowell (2008 [2009]: 111 & 113). For a detailed analysis of the concept of sensation that comes to much the same conclusion, see Ryle (1956).

themselves can at least indirectly present mind-independent objects. Kant thus brings out that empiricism cannot explain operations of the senses as providing cognitive content.

Consequently, unlike Hume's Insight, Kant's Insight undermines empiricism, not only as an account of knowledge – as Hume's Puzzle acknowledges – but even as an account of judgement. For Hume, the implication of Hume's Insight is that, since our imagination projects itself on to the objects whose sensible qualities our sensory consciousness seems to present, we cannot understand how, based on that sensory consciousness, our judgements could be knowledge of mind-independent reality. This is Hume's Puzzle. However, Kant's development of Hume's Insight into Kant's Insight has the more radical implication that, since operations of the senses by themselves can afford us no more than states of sensory consciousness without objective purport, we cannot understand how, based on that sensory consciousness, we are so much as able to make judgements that purport to be about anything. This is what I call Kant's Puzzle:

[KANT'S PUZZLE] If, with the resources of empiricism, we cannot understand our sensory consciousness as even seeming to present us with anything, how is it intelligible that, on the basis of what our sensory consciousness seems to present us with, we can make judgements that so much as purport to be about anything?³⁸

Kant thus sees not only that empiricism implies skepticism regarding the possibility of understanding our supposed ability to know mind-independent reality on the basis of operations of the senses, as Hume argues, but that it implies this as a symptom of a more radical underlying skepticism regarding the possibility of understanding our supposed ability to make judgements that so much as purport to be of anything.³⁹

³⁸ While Hume's Puzzle asks *whether* something that seems to be possible, namely empirical knowledge, can be understood to be *actual*, Kant's Puzzle asks *how* something obviously actual, namely cognitively contentful judgement, can be understood to be *possible*. That is, Hume's Puzzle expresses a *doubt* that demands *refutation* by means of a *proof* of the intelligibility of (the actuality of) empirical knowledge, while Kant's Puzzle expresses an *aporia* that demands *dissolution* by means of a *clarification* of the intelligibility of (the possibility of) cognitively contentful judgement (cf. *Prolegomena*: 275). For more on this difference in the puzzles, see Conant (2012: 31/2 & 2020: 663).

³⁹ The two kinds of skepticism that I attribute to Hume and Kant respectively map onto what James Conant calls *Cartesian skepticism* and *Kantian skepticism* (cf. Conant 2012 & 2016: 83 n.18). Conant suggests, following McDowell, that Cartesian skepticism is a shallower manifestation of Kantian skepticism, but does not explain the relation between these two kinds of skepticism (cf. Conant 2012: 52 & McDowell 1996: xiii). This chapter is an attempt

Kant's Puzzle expresses the insight that empiricism cannot explain how it is possible that we are able to make judgements that purport to be about anything. However, since we are able to make judgements that seem to be about, for instance, mind-independent reality, any tenable account of our cognitive capacities has to be able to explain the possibility of this actuality. Consequently, empiricism stands revealed as an untenable account of our cognitive capacities.⁴⁰ This presents us with the task of developing an alternative account.

Such an alternative account has to meet two conditions established by Kant's reflection on empiricism in general and Hume in particular: (i) our conception of something mind-independent, which includes <substance> and <causation>, cannot be vindicated as cognitively contentful by appeal to operations of the senses by themselves (Hume's Insight); and (ii) this conception is necessary to account for objective purport (Kant's Insight).

Accordingly, Kant's task is summarized by what I call *Kant's Question*:

[KANT'S QUESTION] How can we understand our conception of something mind-independent as cognitively contentful, given that its content cannot be given by specific operations of the senses, i.e. how is a non-empiricist account of objective purport possible?

Kant describes this task in a letter to Markus Herz in which he outlines the project of his future

Critique of Pure Reason:

While I was thinking through the theoretical part in its whole extent [...], I noticed that there was still something essential that was lacking, which I (like others) in my long metaphysical inquiries had failed to consider and which indeed constitutes the key to the whole secret of the metaphysics that had until then remained hidden to itself. I asked myself, namely, *on what grounds rests the reference of what in us is called representation to the object.* (*Letter to Herz*: 129/130, my emphasis)

Kant here says that his main question is how we might vindicate, or 'what grounds' we might give for, the fact that 'what in us is called representation', i.e. our concepts and judgements, has objective purport or 'refers to the object'. And he goes on to explain that since our conception of

at making good on this suggestion by explaining the relation between the two kinds of skepticism through an investigation of Kant's understanding of Hume's Insight.

⁴⁰ Another, textually more explicit, reason for why Kant regards empiricism as an untenable account of our cognitive capacities is that it cannot account for the synthetic a priori knowledge of pure mathematics and general natural sciences that we actually possess (cf. *KrV*: B3-5, B19-20, B127-8; *Prolegomena*: 275).

something mind-independent, which is required to account for this objective purport, cannot be vindicated on the basis of the resources of empiricism, the question is “how [...] a representation referring to an object is possible without being affected by the object in some way”, i.e. how our conception of something mind-independent can be vindicated as cognitively contentful without appeal to specific operations of the senses (*Letter to Herz*: 130/1; cf. *KrV*: A85/B117, B124-8; *Prolegomena*: 259).

6. Conclusion

The previous chapter’s consideration of Descartes’ account of knowledge showed that by appeal to the self-consciousness of judgement alone we cannot vindicate knowledge of anything beyond the cogito: *self-consciousness by itself is empty*. This finding prompted us, in this chapter, to consider the natural thought that the receptive operations of the senses by themselves might afford us consciousness of mind-independent reality that might be able to vindicate judgements based on that consciousness as knowledge. However, our consideration of modern empiricism has revealed that, on the basis of the resources of empiricism, not only are we unable to understand judgements about mind-independent reality as knowledge, as Hume shows, but more radically we are unable even to understand the receptive operations of the senses as providing any cognitive content for such judgements: *the senses by themselves are blind*.

Here is where we thus stand: We have seen that the self-consciousness of our capacity to judge provides us with an avenue to investigate its extent as a capacity to know, but that we cannot vindicate judgement as knowledge by appeal to the self-consciousness of judgement alone (cf. Ch. I). Furthermore, by drawing on the self-consciousness of our capacity to judge, we saw that, since we can make judgements that seem to be about mind-independent objects, there must be some source other than our capacity to judge, from which the capacity to judge receives its cognitive content. However, we also saw that we cannot vindicate empirical judgement as knowledge by

appeal to the receptive operations of our senses by themselves (cf. Ch. II). This suggests that what is required is a vindication of empirical judgement as knowledge that includes both an appeal to the receptivity of operations of our senses and an appeal to the self-consciousness of judgement.

The epistemological project of Kant's *Critique of Pure Reason* is an attempt at providing just such an account of knowledge, while avoiding the one-sided privileging of either the senses or the capacity to judge that undermines the accounts of the modern empiricists and Descartes respectively. Accordingly, Kant famously asserts:

Without sensibility no object would be given to us, and without understanding none would be thought. Thoughts without content are empty, intuitions without concepts are blind. [...] Only from their unification can knowledge arise. (*KrV*: A51/B75, my translation)

While the cooperation of sensibility and the understanding is of paramount significance to Kant's epistemological project, there is little consensus on how exactly to understand the interplay between these two cognitive capacities. Since making headway on this question promises to further advance our insight into our putative capacity to know, the next chapter will consider two alternative readings of the cooperation of sensibility and the understanding in Kant's Transcendental Deduction, and adjudicate between them by considering whether they are able to respond to Kant's Question, which we have seen emerge from Kant's reflection on modern empiricism in general and Hume in particular.

III. KANTIAN EXPERIENCE AND OBJECTIVITY

Giverness as the matter of knowledge

The general sense of the Kantian philosophy is that determinations such as universality and necessity are not found in perception, as Hume has shown; they have another source than perception, and this source is the subject, I in my self-consciousness. (*VGLP III*: 333, my translation)

1. Introduction

The reflections of the previous chapters on Descartes and the modern empiricists have had a twofold upshot: Negatively, we saw that appeal neither to the self-consciousness of judgement alone nor to the receptive operations of the senses by themselves can enable us to vindicate our capacity to judge as a capacity to know mind-independent reality. Positively, we learned (a) that the self-consciousness of our capacity to judge provides us with an avenue to investigate its extent as a capacity to know, and (b) that there must be some source other than our capacity to judge, from which it receives its cognitive content. From this we concluded that an adequate vindication of empirical judgement as knowledge has to take into account both the self-consciousness of judgement and the receptivity of operations of our senses (cf. Ch. II.6).

Kant famously claims that “there are two stems of human knowledge [...] namely sensibility and understanding, through the first of which objects are *given* to us, but through the second of which they are *thought*.” (*KrV*: A15/B29) This chapter thus considers Kant’s understanding of the cooperation between sensibility and understanding in acts of empirical knowing. Specifically, it will focus on how the first *Critique*’s Transcendental Deduction conceives of the interplay of sensibility and understanding in providing us with empirical knowledge.

As we saw in the previous chapter, a key motivation for Kant’s epistemological project is reflection on modern empiricism: specifically, on Hume’s Insight that *empiricism* cannot enable us to understand certain concepts, such as <substance> and <causation>, as having cognitive content (cf. Ch. II.4). As we saw, Kant aims to address this insight by moving beyond empiricism.

Concretely, he aims to show in the Transcendental Deduction that we can understand the relevant concepts, or *categories*, to have cognitive content on *a priori transcendental* grounds (cf. Ch. II.5).

Although this much is universally acknowledged, interpreters dispute why exactly Kant thinks that Hume's Insight needs addressing and thus what the central concern of Kant's Deduction is. One influential reading notes that Hume's Insight implies Hume's Puzzle, which, as we saw, questions the possibility of empirical knowledge of mind-independent reality (cf. Ch. II.4). This reading thus takes the central concern of the Deduction to be the refutation of such external world skepticism.¹

In this chapter, I contend that the interpretation focused on Hume's Puzzle fails both as a reading of the Deduction and as an account of empirical knowledge. I argue, instead, that we should read the Deduction as Kant thinking through the shortcomings of an interpretation focused on Hume's Puzzle and thereby presenting a more adequate account of the ground of empirical knowledge.

Here is a preview of my argument: I contend that a common understanding of the cooperation between sensibility and understanding that prevails in contemporary readings of Kant as well as in epistemology and philosophy of mind generally both can seem to be suggested by Kant himself and is appealing on systematic grounds. I call this reading *empiricist epistemic compositionism*:

[EMPIRICIST EPISTEMIC COMPOSITIONALISM] Operations of sensibility and the understanding are two distinct cognitive operations, because operations of sensibility are intelligible independently of acts of the understanding: operations of sensibility present mind-independent reality, while acts of the understanding conceive of and make judgements about that reality.^{2,3}

¹ Here are two influential expressions of this reading: "A major part of the role of the Deduction will be to *establish* that experience [i.e. empirical knowledge] necessarily involves knowledge of *objects*, in the weighty sense [i.e. mind-independent objects]" (Strawson 1966: 88). "[T]he transcendental deduction [...] is supposed [...] to give a complete answer to the skeptic about the existence of things outside us." (Stroud 1968 [2000]: 9/10; cf. 2017: 114/5) For further statements to this effect, see e.g. McCann (1985: 71) and Cassam (1987: 361/2).

² I qualify the account as 'empiricist' because it claims that sensory operations are self-standingly intelligible, while intellectual acts depend for their intelligibility on sensory operations as what provides them with their cognitive content. While there might be compositional accounts that privilege the intelligibility of intellectual acts over that of sensory operations or take each to be intelligible independently of the other, I only consider the empiricist version. In what follows, I drop the qualification 'empiricist', but it should always be taken to be implicit.

³ Epistemic compositionism is assumed by non-conceptualist readers of Kant, who argue that the understanding plays no role in the sensory presentation of objects by sensibility. See e.g. Hanna (2005), Tolley (2013), Allais (2011, 2015), Onof & Schulting (2015), McLear (2015), and Golob (2017). However, the assumption is also present in some

I reconstruct how this reading of Kant interprets the Deduction as a response to Hume's Puzzle and draw on the previous chapter's account of Kant's deepening of Hume's Insight, which entailed Hume's Puzzle, into Kant's Insight, which entails Kant's Puzzle, to argue negatively that epistemic compositionism fails both as a reading of the Deduction and as an account of empirical knowledge.

I then contend positively that appreciation of Kant's Insight as the deeper implication of Hume's Insight enables us to see that the Deduction, especially as presented in the second edition of the first *Critique* (B-Deduction), includes the attempt to think through the shortcomings of the compositional account in order to arrive at a more adequate successor account, which I call *epistemic hylomorphism*:

[EPISTEMIC HYLOMORPHISM] Operations of sensibility and the understanding are two aspects of a single operation of sensory presentation of mind-independent reality, because operations of sensibility cannot be understood independently of acts of the understanding, and vice versa: operations of sensibility provide the determinable material aspect, while acts of the understanding provide the determining formal aspect of sensory presentation of mind-independent reality.⁴

My argument consists in three substantive steps: The first step sets the stage. I sketch the elements of Kant's account of empirical knowledge (§2) and motivate the prevailing compositional reading of that account (§3). Furthermore, I reconstruct the Transcendental Deduction as a response

conceptualist readings, e.g. Gomes (2014, 2017), as well as in interpretations that do not take an explicit or unequivocal stand on the debate between conceptualist and non-conceptualist readings, e.g. Strawson (1966), Sellars (1968), Beck (1978), Pippin (1982), Falkenstein (1995), Korsgaard (1996), and Allison (2004). Beyond Kant interpretation the assumption is common in epistemology and philosophy of mind, see e.g. Evans (1982), Velleman (2000), Cassam (2007), Burge (2010), Campbell & Cassam (2014).

⁴ This project is worthwhile because even those who read Kant hylomorphically do not explicate the systematic and historic relationship of Hume's and Kant's Insights to each other, much less to compositionism and hylomorphism. Elucidating these relations enables us to appreciate that, rather than being a mere alternative to compositionism, Kant's hylomorphism is the result of his thinking through and ultimately overcoming the shortcomings of compositionism. For hylomorphic readings of Kant, see e.g. Engstrom (1994, 2006, 2016), McDowell (2009, 2017), Conant (2016), Kern (2006, 2018), and Boyle (manuscript). Engstrom (1994) discusses the Deduction's relation to Hume's Puzzle (which he calls 'Cartesian skepticism') and Hume's Insight (which he calls 'Humean skepticism'). While his interpretation is congenial to mine, he primarily focuses on the aim of the Deduction rather than on the systematic and historical relationship between the two puzzles in relation to compositionism and hylomorphism. Conant (2016) suggests an association of compositionism with Hume's Puzzle (which he calls 'Cartesian skepticism') and of hylomorphism with Kant's Puzzle (which he calls 'Kantian skepticism'), but he does not explain how these two problems are systematically and historically related to each other (cf. Conant 2016: 83 n.18).

to Hume's Insight (§4.1) and present Quassim Cassam's reading, according to which the Deduction responds to Hume's Puzzle, as an exemplar of how compositionalist readers interpret the Deduction (§4.2).

The second step puts epistemic compositionism into question. I highlight two central elements of the Deduction that compositionalist readers, like Cassam, have trouble accommodating: Kant's prevalent appeal to the notion of synthesis (§5.1) and the argument of the second stage of the B-Deduction (§5.2). Moreover, I show that Kant's deepening of Hume's Insight into Kant's Insight implies both the unintelligibility of epistemic compositionism and that the Deduction aims to respond to Kant's rather than Hume's Puzzle (§6).

The third step develops epistemic hylomorphism and explains how it evades the difficulties facing compositionism. I provide a reading of the Deduction that, by overcoming epistemic compositionism, is able to make sense of both the second stage of the B-Deduction (§7.1) and Kant's stress on synthesis (§7.2). Furthermore, I contend that, having thus thought through the shortcomings of compositionism, we are compelled to adopt epistemic hylomorphism, whose distinctive conceptions of objectivity I outline briefly (§8). I conclude by sketching the way forward and pointing to some of the implications of my reading for contemporary epistemology and philosophy of mind (§9).

2. Sensibility and understanding

At the outset of the Transcendental Logic Kant introduces his account of knowledge as follows:

Our knowledge⁵ arises from two fundamental sources in the mind, the first of which is the reception of presentations⁶ (the receptivity of impressions), the second the capacity to know an object by means of these

⁵ I translate *Erkenntnis* as 'knowledge' and its cognates, rather than the more common 'cognition'. For a defense of this see Engstrom (2006: 21 n.2). I prefer 'knowledge' because it implies that *Erkenntnis* in its basic sense implies truth.

⁶ The German word that I translate as 'presentation' is *Vorstellung*, standardly translated 'representation'. 'Presentation' is, however, etymologically defensible and not implausible as a rendering of the term (cf. Pluhar 1996: 22 n.73). I here prefer 'presentation' because there is a tendency to reserve 'representation' for *Vorstellungen* that involve the understanding, and I want to avoid prejudging whether having a *Vorstellung* involves the understanding.

presentations (spontaneity of concepts); through the former an object is given to us, through the latter it is thought [...]. Intuition and concepts therefore constitute the elements of all our knowledge, so that neither concepts without intuition corresponding to them in some way nor intuition without concepts can yield knowledge. Both are either pure or empirical. [...] Only pure intuitions or concepts alone are possible a priori, empirical ones only *a posteriori*. If we will call the receptivity of our mind to receive presentations insofar as it is affected in some way sensibility, then [...] the capacity to bring forth presentations itself, or the spontaneity of knowledge, is the understanding. (*KrV*: A50-1/B74-5, my translation & underlining; cf. B1-2, A15/B29, A19/B33, A68/93)

Kant here explains that our knowledge has its source in the cooperation of two cognitive capacities: sensibility and the understanding. Sensibility is our capacity to be presented with objects through intuitions that depend on sensory affection. The understanding is the capacity to judge about those objects by means of concepts that depend on intellectual acts (cf. *KrV*: A19/B33, A50-1/B74-5, A68-9/B93-4).

Kant goes on to explain that for judgement to be empirical knowledge, rather than mere thought, sensibility must present the understanding with objects as cognitive content (cf. *KrV*: A51/B75, A62/B87, A155-6/B194-5, A239/B298).⁷ Hence, in accordance with the epistemic thesis of empiricism, empirical knowledge consists in sensibility presenting intuitions of objects to the understanding and the understanding judging truly about the presented objects (cf. Ch. II.2).

Kant emphasizes the difference in kind of sensibility and the understanding, writing: “[T]hese two [...] capacities cannot exchange their functions. The understanding is not capable of intuiting anything, and the senses are not capable of thinking anything. Only from their unification can knowledge arise.” (*KrV*: A51/B75-6, my translation)

This difference in kind of sensibility and understanding is reflected in Kant’s distinction between the a priori forms of unity of operations of sensibility and understanding respectively. A capacity is individuated and understood as the capacity it is in virtue of the form of unity of its characteristic operation. This form unites the disparate sub-operations that constitute operations of

⁷ Mere thought differs from judgement (and knowledge) in that it can be arbitrary, “I can *think* whatever I will, provided only that I do not contradict myself” (*KrV*: Bxxvi n.), while judgement cannot be arbitrary but must involve “something of necessity” and essentially aims at truth, which consists in judgement’s agreement with the object (*KrV*: B104-5; cf. A58/B82; *JL*: 50).

that capacity as instances of the characteristic operation of that capacity. Kant treats the a priori forms of unity of operations of sensibility and of acts of the understanding in the Transcendental Aesthetic and the Transcendental Analytic respectively (cf. *KrV*: A52/B76).

Kant explains in the Aesthetic that the a priori forms of our *sensibility*, as our capacity to intuit, are space and time. Thus, any intuition, as such, consists in a manifold of sensory affections that are unified in accordance with these forms of our sensibility.⁸ These forms also enable the construction of the *pure intuitions* that Kant mentions at A50-1/B74-5, quoted above. Pure intuitions are presentations of objects as spatial or temporal that do not depend on any specific sensory affection: for instance, the a priori intuition of a triangle that is a subject matter of geometry.

Kant explains in the Metaphysical Deduction of the Analytic that the a priori forms of the *understanding*, as the capacity to judge, are the a priori forms of judgement. Thus, any judgement, as such, consists in a manifold of conceptual presentations that are unified in accordance with these forms of judgement. These forms – for example, the form of subject-predicate judgement, which Kant calls ‘categorical judgement’ – are part of the subject matter of pure general logic (cf. *KrV*: A70/B95, A76/B102, A130-1/B169-70).

Kant contends that the forms of judgement provide a ‘guiding thread (*Leitfaden*)’ to the discovery of what he calls ‘categories’, i.e. the *pure concepts* that he mentions at A50-1/B74-5, quoted above. The *categories* are a priori concepts of an object in general that correspond to the a priori forms of judgement (cf. *KrV*: A79-80/B105, B128, B158; *Prolegomena*: 303). For example, the category of substance corresponds to the form of categorical judgement.⁹ Any concept of a specific object, as such, consists in a manifold of presentations that are unified in accordance with one or more of the categories. The categories are conceptual presentations of an object in general

⁸ For simplicity I gloss over the fact that there are inner intuitions presenting objects, such as subjective states, that are as such unified merely by time (cf. *KrV*: A33/B49-50).

⁹ For more on this, see §5.1.

that do not depend on any specific sensory affection: for instance, the a priori concept of substance, which is part of the subject matter of what Kant calls transcendental logic (cf. *KrV*: A76-77/B102, A130-1/B169-70).

3. The compositional reading of Kant's account of empirical knowledge

The difference in kind between operations of sensibility and acts of the understanding leaves open the possibility that these operations depend on each other for their intelligibility. The operations of the kidneys are different in kind from those of the heart, for instance, but the concept of the former depends on the intelligibility of the concept of the latter and vice versa. We have already seen that the intelligibility of acts of the understanding that claim to be empirical knowledge depends on operations of sensibility. For, if judgement is to be empirical knowledge, rather than mere thought, sensibility has to present the understanding with objects as cognitive content (cf. §2). However, there is no obvious indication that something parallel is true of the operations of sensibility. This makes it a live option that operations of sensibility are intelligible independently of acts of the understanding, as is maintained by *epistemic compositionism*, which in effect is an expression of the givenness thesis of empiricism – that when all goes well operations of sensibility *by themselves* yield sensory presentations of objects (cf. Ch. II.2).

The structure of the *Critique* itself can seem to provide textual motivation for attributing compositionism to Kant. He investigates sensibility and understanding separately, with the Transcendental Aesthetic explaining intuition, and the Transcendental Analytic explaining knowledge on the basis of intuition (cf. *KrV*: A15-6/B30, A51-2/B76). Compositionalist readers might take the fact that Kant expounds the Aesthetic prior to and thus independently of the Analytic to imply that its analysis of sensibility is meant to be intelligible independently of the Analytic's analysis of the understanding (cf. *KrV*: A16/B29).

There is also a systematic motivation for assuming epistemic compositionism. It turns on the thought that, *if the intelligibility of sensibility depended on the understanding, then operations of sensibility would essentially involve acts of the understanding.*

This thought makes it tempting to argue as follows: The understanding is responsible for judging, which is a subjective act; sensibility is what presents a judging subject with objects to judge about, and so provides for the objectivity of judgements – the objectivity that is required for those judgements to be empirical knowledge. But if sensibility depended for its intelligibility on the understanding, then operations of sensibility would essentially involve acts of the understanding, which are as such subjective. And in that case intuitions, i.e. sensory presentations of objects, would at least in part depend on subjective acts of the understanding, thus rendering them insufficiently mind-independent to provide for the objectivity of judgement that is required for judgement to be empirical knowledge. That is, intuitions would fall into the scope of Hume’s Puzzle.

Consequently, we are left with a choice between compositionism and a form of intellectual projectivism, on which the understanding at least in part shapes the sensory presentations of objects.¹⁰ And we must choose compositionism because (i) Kant explicitly rejects the material idealism that goes along with the intellectual projectivism that leads to Hume’s Puzzle, and (ii) intellectual projectivism is implausible as an account of empirical knowledge, so that, if at all possible, we should avoid attributing it to Kant (cf. *KrV*: B274; Prichard 1909; Gomes 2017).¹¹

¹⁰ This projectivism should not be conflated with Kant’s transcendental idealism. Transcendental idealism is the claim that what sensibility presents are not things-in-themselves but appearances, but the outlined projectivism puts into question our ability to even know the appearances presented by sensibility, as such.

¹¹ There are further arguments for assuming compositionism that turn on the sketched systematic thought. One such argument contends that, if sensory presentation of objects essentially involved the understanding, then non-human animals, who, for Kant, lack the understanding, would be unable to enjoy sensory presentations of objects. But Kant takes animals to enjoy such presentations, hence we need to read him compositionally (cf. *JL*: 64/5; *FS*: 2: 59; McLearn 2011; Golob 2017). Another argument contends that the understanding’s involvement in operations of sensibility would undermine the difference in kind between the forms of unity of intuitions and of concepts, so that in order not to flout this Kantian doctrine we must opt for compositionism (cf. McLearn 2015; Onof & Schulting 2015; Allais 2015: Ch. 7). While constraints of space prohibit consideration of these arguments here, I think, they, like the argument I consider, dissolve once we appreciate Kant’s epistemic hylomorphism (cf. §8).

The compositional reading of Kant thus holds that operations of sensibility by themselves present mind-independent objects, and that judgements about mind-independent objects are empirical knowledge if they agree with what operations of sensibility present (cf. §2). It thus effectively endorses both the givenness and the epistemic theses of empiricism. This implies that on this reading the only way for Kant to move beyond empiricism is to abandon the semantic thesis of empiricism – the thesis that all cognitive content is given by operations of sensibility. This seems to fit Kant’s own explanation of the motivations of his non-empiricist epistemological project. After all, Hume’s Insight, to which Kant claims to be responding, is an implication of the semantic thesis of empiricism (cf. Ch. II.4); and we identified Kant’s Question as asking how we can understand our conception of something mind-independent as cognitively contentful, given that according to Hume’s Insight its content cannot be given by specific operations of the senses (cf. Ch. II.5). In line with this, the next section will sketch Kant’s response to this question and thus to Hume in the Transcendental Deduction.

4. The Transcendental Deduction

Having sketched the elements of Kant’s account of empirical knowledge and motivated the prevailing compositionist reading of that account, I here reconstruct the Transcendental Deduction as a response to Hume’s Insight, and present Cassam’s reading, according to which the Deduction responds to Hume’s Puzzle, as an exemplar of how compositionalist readers interpret the Deduction.

4.1. Responding to Hume’s Insight

The Metaphysical Deduction claims that concepts like <substance> and <causation>, which, at least in part, constitute our conception of something mind-independent, and which according to Hume’s Insight cannot be empirically vindicated as cognitively contentful, are a priori categories. While this reconceives these concepts as having their origin in the understanding, rather than in the

senses, it leaves open whether and how they can be vindicated as cognitively contentful (cf. *KrV*: A66/B91, A94-5/B127-8). The Transcendental Deduction is concerned with this further task, i.e. it aims to answer Kant's Question.

Kant argues that for any concept, including the categories, to have cognitive content, sensibility has to be able to present objects that exemplify those concepts (cf. *KrV*: A51/B75). Hence, he does not argue that the categories derive their content exclusively from the understanding.¹² Instead, he contends that if we can show a priori that the categories are cognitively contentful, i.e. that they are exemplified by what sensibility presents, then we will have vindicated them as a priori concepts of an object in general that originate in the understanding (cf. *KrV*: A76-7/B102, B148-9, A155-6/B194-5, A220/B267, B288/9, A239/B298).

The Deduction's goal therefore is to explain how it is possible for the categories, which originate independently of any specific operation of sensibility, to be exemplified by what sensibility presents (cf. *KrV*: A85/B117). Kant aims to show that while, in line with Hume's Insight, the conception of something mind-independent cannot be understood as cognitively contentful on *empiricist* grounds, i.e. by appeal to what *specific* operations of sensibility by themselves supposedly present, it can be so understood on *a priori transcendental* grounds, i.e. by appeal to the a priori conditions for the possibility that operations of sensibility *in general* can present objects. He argues that a priori reflection on sensory presentation, i.e. intuition, *in general*, via a priori reflection on the mere *form* of intuition, shows that the categories are exemplified by what any intuition whatsoever presents, thereby vindicating the categories as cognitively contentful and thus

¹² Descartes' attempt to derive innate ideas from the consciousness that grounds the cogito alone is in effect an attempt to derive the categories exclusively from the understanding (cf. Ch. I). Hume considers the possibility that <substance> and <causation> might be derived *exclusively* from reason, but concludes that this is impossible (cf. *Treatise*: 92, 157). Kant agrees with Hume's assessment, which he regards as part of Hume's Insight (cf. *KrV*: A94-5/B127-8; *Prolegomena*: 257-9, 310).

addressing Hume's Insight (cf. *KrV*: A79/B104-5, A92-5/B124-9, A146/B185, A766/B794; *Prolegomena*: 308/9).

The Deduction thus in effect argues for a replacement of the semantic thesis of empiricism with what I call Kant's *transcendental semantic thesis*:

[TRANSCENDENTAL SEMANTIC THESIS] Certain concepts¹³ can be vindicated as cognitively contentful by a priori reflection on the conditions for the possibility that operations of sensibility in general can present objects.

However, if it is the goal of the Deduction to address Hume's Insight, how can compositionalist readers interpret it as centrally concerned with Hume's Puzzle? The following sub-section answers this question, sketching how compositionalist readers interpret the Deduction as a dissolution of Hume's Puzzle and explaining how this is compatible with understanding the Deduction as addressing Hume's Insight.

4.2. Responding to Hume's Puzzle

As we saw, Hume's Puzzle questions the possibility of understanding our empirical judgements about mind-independent objects as knowledge, on the basis that we cannot vindicate the idea that our sensory consciousness actually presents mind-independent objects (cf. Ch. II.4). Compositionalist readers argue that the Deduction includes an anti-skeptical *transcendental argument*, which aims to dissolve Hume's Puzzle by showing that sensory consciousness must present mind-independent objects, thus undermining the basis for the external world skepticism expressed by the puzzle.¹⁴ For a representative exemplar of this interpretation, we can look at

¹³ For simplicity I bracket Kant's conception of empirical concepts.

¹⁴ For other readings of the Deduction along these lines, see e.g. Wolff (1963), Bennett (1966), Strawson (1966), McCann (1985), and Stroud (2017).

Cassam's "Transcendental Arguments, Transcendental Synthesis and Transcendental Idealism" (cf. Cassam 1987: 361/2).¹⁵

Cassam contends that the Deduction starts by articulating a conceptual truth that even Hume would accept, namely that for there to be empirical judgements that seem to be about mind-independent objects, the elements of sensory consciousness – i.e. impressions for Hume and empirical intuitions for Kant – must belong to a unified sensory consciousness that can serve as the basis for such judgements (cf. Cassam 1987: 359/60).¹⁶ According to Cassam, Kant argues in a second step that for such a unified sensory consciousness to be so much as possible, sensory consciousness must display unity of a kind that is possible only if it presents mind-independent objects (cf. Cassam 1987: 360-1). Consequently, empirical intuition must present mind-independent objects on pain of making it impossible for there to be empirical judgements that seem to be about mind-independent objects.¹⁷

While on this interpretation the argument of the Deduction purports to show that sensory consciousness must present mind-independent objects, thereby enabling us to dissolve Hume's Puzzle, it does not obviously conform with the above sketched aim of the Deduction to explain

¹⁵ Cassam explains that a *transcendental argument* aims to show that a claim *p* about how things are with reality, which is put into question by a skeptic, is a condition for the possibility – 'satisfaction condition' – for another claim *q* about how things are with our minds – 'conceptual condition' – which the skeptic must accept (cf. Cassam 1987: 357/8). It thus aims to convince the skeptic of *p*, which she doubts, by showing her that *q*, which she accepts, is only possible if *p* is actual.

¹⁶ Hume should accept this conceptual condition, for while he denies that we can vindicate there being a single subject of our unified sensory consciousness, he does not deny that we enjoy a unified sensory consciousness (cf. *Treatise*: 635/6).

¹⁷ Cassam notes that one might wonder, with Stroud (1968 [2000]), if it would not be enough for our sensory consciousness to *merely seem* to present mind-independent objects (i.e. for *us to believe that the senses present* mind-independent objects), as Hume admits, rather than to *actually* present mind-independent object (i.e. for *the senses to present* mind-independent objects), as the argument claims (cf. Cassam 1987: 356/7). However, as both Cassam and Stroud point out, given Kant's 'transcendental idealism', on which *how we present the objects of our senses as being* is *how the objects of our senses are*, there is no distance between these two claims (cf. Stroud 1984b [2000]: 88-90; Cassam 1987: 362/3, 2007: 211). Accordingly, they further note that both options of the choice between (a) the failure of the anti-skeptical ambition of the argument of the Deduction, and (b) 'transcendental idealism', fall short of the promise of a genuine refutation of external world skepticism (cf. Cassam 1987: 368/9; Stroud 2017: 119). I return to this below (cf. §§5.1, 7.1, n.29)

how it is possible that the categories are exemplified by what intuition presents, thus vindicating them as cognitively contentful. However, we can bring out how Cassam's reconstruction of the Deduction can satisfy this desideratum as follows:

For Kant, the categories, which include <substance> and <causation>, are concepts of a mind-independent object in general. Therefore, the forms of judgements that at least seem to be about mind-independent objects must correspond to the categories. Accordingly, Kant argues as follows: In the first step he contends that, for it to be possible that there are such *empirical* judgements at all, what sensibility presents must be able to be the object of those judgements. In the second step, he argues further that for what sensibility presents to be able to be the object of judgements, it must conform to the forms of judgement. It does so by exemplifying the categories, as the concepts of a mind-independent object which correspond to the forms of judgement. For, if what sensibility presents did not exemplify the categories, then it could not be the object of judgement, because it would not conform to the forms of judgement. Hence, for it to be possible that there are empirical judgements that seem to be about mind-independent objects at all the forms of intuition must conform to the categories (cf. *KrV*: B143). Thus understood, Cassam's reading addresses the above sketched aim of Kant's Deduction: it presents a transcendental argument that addresses Hume's Insight by establishing that the categories must be exemplified by what intuition presents, on pain of making it impossible for there to even be empirical judgements that seem to be about mind-independent objects.

In the context of explaining the motivations of his epistemological project, Kant asserts in the second *Critique* that "*Hume's* empiricism with regard to principles inevitably leads to skepticism" (*KpV*: 52, my translation).¹⁸ This diagnosis might suggest the reading I have outlined: To address

¹⁸ Kant argues that the Deduction is needed to forestall Hume's skeptical empiricism from generalizing from metaphysical knowledge, the impossibility of which Hume acknowledges, to mathematical knowledge, which Hume takes to manifest actual a priori knowledge (cf. *Treatise*: 70, 95, 180; *Enquiry* 25, 165; *Prolegomena*: 272/3; *KpV*: 52).

‘skepticism’ or Hume’s Puzzle we need to abandon ‘empiricism’: specifically, its semantic thesis that all cognitive content is given by operations of sensibility, in favor of the transcendental semantic thesis understood as substantiated by the sketched transcendental argument from the unity of sensory consciousness to the cognitive contentfulness of the categories.

The compositional reading of the Deduction thus is characterized by replacing the semantic thesis of empiricism with Kant’s transcendental semantic thesis, while holding on to the givenness and epistemic theses of empiricism. It both addresses Hume’s Insight by entitling us to the conception of something mind-independent, and dissolves Hume’s Puzzle by enabling us to explain how it is possible that our empirical judgements about mind-independent objects amount to knowledge.

In what follows, I argue that while this reading does make sense of some elements of the Deduction, it fails to accommodate important other aspects of it (cf. §5). I contend furthermore that the reason for this is its characteristic adherence to the givenness thesis, which blinds it to Kant’s Insight (cf. §6).

5. The compositional reading’s failure to make sense of the Transcendental Deduction as a whole

Compositionalist readers like Cassam tend to discount central elements of the Deduction as misguided, because they do not fit their reading. Here, I present two such elements: (i) the notion of synthesis, and (ii) the argument of the second stage of the B-Deduction. This brings Kant’s account of empirical knowledge and the compositional reading of it into further relief and questions the ability of this reading to make sense of the Deduction as a whole.

5.1. The notion of synthesis and the compositional reading

Synthesis pervades Kant’s argument in both editions of the first *Critique*. He explains *synthesis* as “the action of putting different presentations together with each other and comprehending their

manifoldness in one knowing (*Erkenntnis*).” (*KrV*: A77/B103; cf. B159). As such, synthesis is the characteristic act of ‘the understanding in general’, as the capacity to judge (*Vermögen zu urteilen*), i.e. the capacity for discursive ‘knowledge through concepts’ (*KrV*: A68/B93; cf. A50-1/B74-5, A77-8/B102-3). Kant explains that concepts rest on *functions*, which he takes to be “the unity of the action of ordering different presentations under a common one”, i.e. concepts express functions which manifest themselves in acts of synthesis (*KrV*: A68/B93). As such, concepts are principles for acts of synthesis.¹⁹

In §10, Kant states:

The same function that gives unity to the different presentations *in a judgement* also gives unity to the mere synthesis of different presentations *in an intuition*, which, expressed generally, is called the pure concept of understanding. The same understanding, therefore, and indeed by means of the very same actions through which it brings the logical form of a judgement into concepts [...], also brings a transcendental content into its presentations [...], on account of which they are called pure concepts of the understanding that pertain to objects a priori (*KrV*: A79/104-5, my underscoring; cf. B130).

Kant here distinguishes two species of synthesis: ‘judgement’ and ‘intuition’. *Judgement* unifies a manifold of conceptual presentations in a judgement. The synthetic ‘function of the understanding’ manifests itself, in such acts of *judgemental synthesis*, as the forms of judgement. *Intuition* unifies a manifold of sensory presentations in an intuition of an object. The ‘same function of the understanding’ that manifests itself in judgemental synthesis manifests itself in *sensible synthesis* and can be expressed in terms of the categories (cf. *KrV*: A69/B94, B130, B143, A245).

This commonality of function is reflected by the isomorphism between the table of judgements and the table of categories (cf. *KrV*: A70/B95, A80/B106). These tables, which Kant introduces in the Metaphysical Deduction, express the manifestation of ‘the same function’ of the understanding in judgement and intuition respectively. For instance, the function of the understanding that enables the distinction of subject and properties can equally manifest itself in judgemental and in intuitional synthesis (cf. *KrV*: B128/9). In judgemental synthesis it manifests itself in accordance with the

¹⁹ For more on synthesis, see Ch. IV.

categorical form of judgement, which expresses the affirmation or denial of properties of a subject, in accordance with the principle that ‘the subject is never the property of anything else within *this judgement*’. In sensible synthesis it manifests itself in accordance with the *category of substance*, which expresses the unification of sensory presentations into an intuition of an object that must always be conceived as the bearer of properties, in accordance with the principle that ‘the subject is never the property of anything else within *any judgement*’.²⁰

In the Transcendental Deduction Kant aims to vindicate this commonality of the forms of synthesis that unify judgements and intuitions. He aims to accomplish this by showing that the *same function* of the understanding underlies both the forms of intuition, i.e. space and time, and the concepts of an object in general, i.e. the categories, which correspond to the forms of judgement (cf. *KrV*: A128, B159/60).

While compositionalist readers acknowledge the omnipresence of synthesis in the Deductions of both editions of the first *Critique*, they are suspicious of this feature of Kant’s account, and they argue that we should exorcise it from a convincing Kantian account of empirical knowledge. Cassam, for instance, provides the following two reasons for exorcising the notion of synthesis: (i) synthesis does not contribute anything to dissolving Hume’s Puzzle, and (ii) synthesis actually interferes with dissolving Hume’s Puzzle (cf. Cassam 1987: 365-72; 2007: 136/7, 142-4).²¹

To demonstrate the superfluity of synthesis, Cassam asks: “What ensures that the sensible given is susceptible to synthesis?” (Cassam 2007: 143) For Cassam, this question presents a dilemma because to respond to it, he argues, Kant either (a) has to posit a further kind of ‘proto-synthesis’

²⁰ For a similar interpretation, see e.g. Allison (2004: 149).

²¹ The *locus classicus* of this suspicion is Strawson (1966), who aims to provide a reading of the first *Critique* that exorcises synthesis. Strawson’s motivation is the following: If synthesis were a cognitive act of an empirical subject, then we could have empirical knowledge of it, but, for Kant, synthesis is the very condition of any empirical knowledge, so that it cannot itself be known empirically. Strawson concludes that synthesis is the cognitive act, not of an empirical subject, but of a mythical transcendental subject that is the object of the imaginary subject of transcendental psychology, which should be excluded from an account of what we can learn from Kant (cf. Strawson 1966: 32 & 97). See also McCann (1985: 71/2).

that synthesizes sensory presentations into empirical intuitions that present a ‘sensible given’ and that are susceptible to judgemental synthesis; or (b) he has to accept that empirical intuitions present a ‘characterless given’ and receive their original character or form in the judgemental synthesis that yields empirical knowledge of mind-independent objects (cf. Cassam 1987: 371/2; 2007: 143). However, Cassam argues that it is unattractive to posit a further kind of synthesis, since this would raise the question in virtue of what mere sensory presentations are susceptible to ‘proto-synthesis’, and thus start us on a regress of syntheses. As for the other horn of the dilemma, Cassam contends that the idea of empirical intuition as presenting a ‘characterless given’ is incoherent, because a ‘characterless given’ would be nothing. For to be anything is to be some determinate way, i.e. to have some character or determination. However, the sensible given is supposed to *be* the mind-independent object that is supposedly presented in our empirical intuition and known in our empirical knowledge. Cassam concludes that the alleged susceptibility of the ‘sensible given’ to synthesis at best constitutes a “brute fact” or “unargued assumption” on Kant’s part, which contributes nothing to the dissolution of Hume’s Puzzle (Cassam 2007: 143; 1987: 370).²²

The second reason for Cassam’s dismissal of synthesis is a version of the systematic motivation of compositionality that we reconstructed above (cf. §3). Cassam argues that, if the presentation of the ‘sensible given’ involved mental acts of synthesis, this would taint the mind-independent character of the presented ‘sensible given’, leading to an intellectual projectivism, on which the ‘sensible given’ is *mind-dependent*. This would render the account unable to dissolve Hume’s Puzzle (cf. Cassam 1987: 362-72; 2007: 143, 218/9). On this intellectual projectivism, the ‘sensible given’ would (at least in part) be a product of acts of synthesis by our minds. Thus, what we can understand our empirical intuitions to present and our empirical judgements to know would (at least in part) reflect our minds’ involvement in the constitution of what we have presented to us,

²² For similar objections to Kant’s invocation of synthesis, see Van Cleve (1999: 86) and Allais (2015: 171/2).

so that the ‘sensible given’ could at best be appearances to us, but not the things themselves (cf. n.17).²³ Given these supposed complications, Cassam concludes that his “synthesis-free” compositional reading provides a compelling account of empirical knowledge that remains Kantian at least in spirit (Cassam 2007: 146; cf. 144).

5.2. *The argument of the second stage of the B-Deduction and the compositional reading*

The second central element of the Deduction that compositionalist readers tend to discount is the second stage of the B-Deduction. It is generally accepted that the B-Deduction has two stages:²⁴ The first stage stretches from §15 to §20, the second from §22 to §26, with §21 serving as an intermediate review of what has been accomplished and a preview of what is yet to come.

Kant concludes the first stage by stating, in the title of §20: “All sensible intuitions stand under the categories, as conditions under which alone their manifold can come together in one consciousness.” (*KrV*: B143) This accords with the conclusion of the transcendental argument that compositionalist readers find in the Deduction, namely that the categories must be exemplified by what intuition presents, on pain of otherwise rendering it unintelligible that there could be empirical judgements that seem to be about mind-independent objects (cf. §4.2).

However, in the body of §20 Kant provides the following gloss on his conclusion:

[A]ll manifold, in so far as it is given in *one* empirical intuition [*in Einer empirischen Anschauung*], is *determined* in regard to one of the logical functions of judgement, by means of which, namely, it is brought to a consciousness in general. But now the *categories* are nothing other than these very functions for judging [...]. Thus the manifold in a given intuition also necessarily stands under the categories. (*KrV*: B143)

Kant here ungrammatically capitalizes the indefinite article ‘*Einer*’ (which in German is the same word as the adjective ‘one’), presumably to highlight the ‘oneness’ or unity (*Einheit*) of the empirical intuition (in English most naturally expressed by emphasizing the indefinite article ‘*an*

²³ For readings that share this concern, see e.g. Strawson (1966: 96), Van Cleve (1999: 89, 104) and Stroud (2017: 119).

²⁴ The *locus classicus* of this reading is Henrich (1969).

empirical intuition'), as opposed to the empirical intuition being one rather than, say, two. He thus aims to emphasize that the conditions at issue, i.e. the categories, are conditions on anything's partaking in the *unity* of *an* empirical intuition. His claim is that the manifold of an empirical intuition is unified by the functions of the understanding that can be expressed in the categories, so that the intuition can present an object.²⁵

This claim conflicts with the compositional reading, on which empirical intuitions constitute a supposedly self-standingly intelligible sensory component of empirical knowledge, which once the understanding subsumes it under the categories is transformed into empirical knowledge. Cassam captures this apparent conflict in the following dilemma: Either (a) Kant claims that empirical intuition essentially involves the categories, denying that empirical intuitions are what is given by operations of sensibility by themselves; or (b) he claims that what is given by operations of sensibility by themselves are empirical intuitions, denying that empirical intuition essentially involves the categories (cf. Cassam 1987: 373/4). The former option contradicts the compositional reading, while the latter goes against §20. Cassam maintains compositionism, claiming that the B-Deduction is “quite unpersuasive” (Cassam 1987: 373).

However, some compositionalist readers have proposed an interpretation that can bring their reading into seeming conformity with §20. According to this interpretation, we must distinguish two kinds of empirical intuition, which Kant fails to clearly separate:²⁶ (a) There are *thin empirical intuitions*, which present what is given by operations of sensibility by themselves, unified only by spatio-temporal form, not by the categories, i.e. what Cassam calls ‘empirical intuition’. These thin empirical intuitions present mind-independent objects, which, as such, do not yet constitute possible objects of judgement; Kant first introduces them in the Transcendental Aesthetic (cf. *KrV*:

²⁵ This insight is due to Henrich (1969: 645). For an interpretation that questions it, see Guyer (2010: 143).

²⁶ For versions of this interpretative strategy, see e.g. Sellars (1968: Ch. 1), Beck (1978: 41-3), Guyer (1992: 131), Allison (2004: 81/2), Allais (2015: Ch. 7 & 11), and Vinci (2015: Ch. 6 & 7).

A20/B34). And (b) there are *thick empirical intuitions*, which present what is given by operations of sensibility as objects of judgement, unified by both spatio-temporal form and the categories, i.e. what §20 describes as ‘empirical intuition’. These thick empirical intuitions present mind-independent objects, which, as such, constitute objects of judgement: Kant introduces them in the B-Deduction. Distinguishing thick and thin empirical intuitions would allow the compositional reading to dissolve Cassam’s dilemma. For it enables proponents of the reading to argue that when Kant claims that involvement of the categories is essential to empirical intuition, he is introducing thick empirical intuitions as a further kind of empirical intuition, thus leaving thin empirical intuitions, as the sensory component of the compositional reading, untouched.

As evidence that Kant countenances thin empirical intuitions, compositionalist readers might cite Kant’s seeming acknowledgement, in §13, that there could be empirical intuitions that do not conform to, and thus do not essentially involve, the categories (cf. *KrV*: A90-1/B122-3).

While this interpretation can bring the compositional reading into conformity with §20 and thus with the first stage of the B-Deduction, it cannot save the second stage, especially the pivotal §26. There Kant aims to show that what intuition presents in general exemplifies the categories by arguing that the principles of unity of intuition are not intelligible independently of the principles of unity expressed by the categories (cf. *KrV*: 159-161). Against this, Cassam claims on behalf of the compositional reading:

Kant’s main argument on this score must be deemed an abject failure. The most that the argument shows is the involvement of the concepts of space and time in the synthesis of apprehension [i.e. thin empirical intuition], but it is evidently a mistake to identify these concepts with the categories. (Cassam 1987: 374)

For Cassam, Kant’s argument in §26 fails because, while it is undisputable that intuitions present objects in space and time, it is a mistake to try ‘to identify these concepts with the categories’. For, the concepts of space and time are obviously different from the concepts of an object in general. However, even if we could make sense of some relation between these disparate concepts, any

argument to that effect would contradict the compositional reading. For, space and time are the forms of unity of our sensibility, while the categories are expressions of the forms of unity of the understanding. And since, according to the compositional reading, operations of our sensibility are self-standingly intelligible, the intelligibility of their form cannot depend on an understanding of categorial form, because, as the form of sensibility, it must be intelligible independently of the form of the understanding.

As a consequence of the incompatibility of the second stage with the compositional reading, some compositionalist readers, like Cassam, argue that an interpretation of the Deduction should primarily be based on the first edition Deduction (A-Deduction), supplemented by the first stage of the B-Deduction (cf. Cassam 1987: 362, 374). Such readers might support their dismissal of the second stage of the B-Deduction with the following consideration: The title of §20 tells us that the first stage has shown that *all* sensible intuitions stand under the categories, while Kant's concern in §26 is with "the way in which the empirical intuition is given in sensibility", i.e. with sensible intuition as it is given to us humans as spatio-temporally unified (*KrV*: B144). This might suggest that §§15–20 show that any object presented by sensible intuition exemplifies the categories, while §§22–26 demonstrate specifically that the objects presented by our human sensible intuition exemplify the categories. But, this makes the second stage redundant. For, if the objects presented by sensible intuition exemplify the categories, then the objects presented by our human sensible intuition exemplify the categories, for anything that is true of the genus is true of the species.²⁷

For compositionalist readers like Cassam, it is in the A-Deduction and the first stage of the B-Deduction that Kant aims to dissolve Hume's Puzzle, by arguing transcendently that (thin) empirical intuition must present mind-independent objects that exemplify the categories, in order

²⁷ For an outline of this interpretation see Allison (2004: 160-2). Paul Guyer, who adopts this reading, comments: "[I]t is deeply problematic *whether* Kant should ever have suggested that there are two stages to the deduction." (Guyer 1992: 160 n.32, cf. 154)

for what at least seem to be empirical judgements about mind-independent objects to be so much as possible. Thus, Cassam, for example, contends that the A-Deduction and the first stage of the B-Deduction aim to explain a priori *that* (thin) empirical intuitions must be such that they are able to present mind-independent objects that exemplify the categories, thus dissolving Hume's Puzzle.²⁸ However, the second stage of the B-Deduction aims to explain a priori "*why* or *how*" (thin) empirical intuitions are able to present mind-independent objects that exemplify the categories (Cassam 1987: 372). This, however, Cassam thinks, is not a legitimate philosophical question, but must instead be answered through empirical investigation (cf. Cassam 1987: 370-2; 2007: 70, 143).

Overall, compositionalist readers of Kant credit the Deduction with a promising anti-skeptical transcendental argument, but discount as misguided both synthesis and the second stage of the B-Deduction. In the remainder of this chapter, I argue that the compositional reading fails to make sense of these central elements of Kant's Deduction because its compositionalist assumption, expressed in the givenness thesis of empiricism, blinds it to Kant's Insight (cf. §6). Furthermore, I contend that we can make sense of these elements if we take Kant's Insight and Puzzle seriously, by thinking our way through the shortcomings of the compositional account to an adequate hylomorphic successor account of empirical knowledge (cf. §§7 & 8).

6. The compositional reading's incompatibility with Kant's Insight

To see why the compositional reading fails to make sense of the Deduction as a whole, we need to return to Hume: specifically, to Hume's Insight, which, by revealing a shortcoming of empiricism, motivates Kant in the Deduction to move beyond empiricism.

²⁸ Cassam (2007) gives up even this limited anti-skeptical role of the Deduction, arguing, with Ameriks (1978 [2003]), that the Deduction's regressive transcendental argument shows that, assuming that empirical knowledge of mind-independent objects is possible, the categories must apply to the objects presented by intuitions (cf. Cassam 2007: Ch. 4).

As we saw, the compositional reading takes the relevant shortcoming of empiricism to lie in its semantic thesis that all cognitive content is given by the senses (cf. §§3 & 4.2). In the Deduction Kant replaces this thesis with his transcendental semantic thesis that certain concepts can be vindicated as cognitively contentful by a priori reflection on the conditions for the possibility that operations of sensibility in general can present objects (cf. §4.1). According to compositionalist readers, the Deduction thus moves beyond empiricism by abandoning the semantic thesis of empiricism in favor of Kant's transcendental semantic thesis. The compositional reading substantiates Kant's transcendental semantic thesis in terms of a transcendental argument. This argument shows that, for empirical judgements that seem to be about mind-independent objects to be possible at all sensibility must present mind-independent objects, so that we can know mind-independent reality on the basis of what the senses present, i.e. we can dissolve Hume's Puzzle (cf. §4.2).²⁹

However, we saw in the previous chapter that Kant deepens Hume's Insight that, with the resources of empiricism, we cannot understand ourselves as entitled to a conception of something mind-independent (cf. Ch. II.4), into Kant's Insight that, with the resources of empiricism, we cannot understand operations of sensibility as even seeming to present us with anything (cf. Ch. II.5). Kant's deepening of Hume's Insight into Kant's Insight implies both: (i) that Kant moves beyond empiricism by abandoning not only its semantic thesis, but also its givenness thesis, which undermines the very intelligibility of epistemic compositionism; and (ii) that, since Kant's Insight implies Kant's Puzzle, which questions the intelligibility of empiricism as an account of judgement, it cannot be the primary goal of the Deduction to dissolve Hume's Puzzle.

²⁹ There is a debate about whether transcendental arguments are ultimately able to live up to their anti-skeptical promise (cf. e.g. the papers in Stern 1999; n.17). My aim is not to contribute to this debate, but to show that its outcome is irrelevant to the success or failure of Kant's Deduction.

Once we appreciate Kant's Insight as the deepening of Hume's Insight, the shortcoming of empiricism that it reveals is that the semantic thesis of empiricism undermines not only its epistemic thesis, as Hume's Insight implies and Hume's Puzzle expresses, but, as expressed by Kant's Insight, it also undermines its givenness thesis that, when all goes well, operations of sensibility *by themselves* yield sensory presentations of objects. For, the semantic thesis makes it unintelligible that the categories are cognitively contentful (Hume's Insight), which in turn makes it unintelligible that operations of sensibility can even seem to present any objects, i.e. have any objective purport (Kant's Insight). Hence, the semantic thesis makes it unintelligible that the operations of sensibility by themselves can have any objective purport.³⁰ This entails that empiricism is not entitled to the givenness thesis. But the givenness thesis in effect expresses epistemic compositionality. Hence, Kant's Insight undermines the very intelligibility of epistemic compositionality.

We saw furthermore in the previous chapter that Kant's Insight implies Kant's Puzzle, which questions how, given Kant's Insight, it is intelligible that we can make judgements that so much as purport to be about anything (cf. Ch. II.5). This suggests that the problem that Kant is concerned to address in the Deduction is Kant's Puzzle rather than Hume's Puzzle. Put differently, Kant's Question is: How can we understand our conception of something mind-independent as cognitively contentful, given that its content cannot be given by specific operations of the senses, i.e. *how is a non-empiricist account of objective purport possible?*

³⁰ The compositionalist might claim that as a Kantian she does not appeal to the semantic thesis of empiricism, but to Kant's transcendental semantic thesis, so that she is able to vindicate the categories as cognitively contentful and thus avoid the unintelligibility of the givenness thesis. However, as we saw, Kant's transcendental semantic thesis is a response to Hume's Insight, which according to Kant's Insight undermines the givenness thesis. Therefore, the transcendental semantic thesis cannot be substantiated as a transcendental argument that invokes the givenness thesis. That is, Kant's transcendental semantic thesis states what is needed to avoid Hume's Insight and thus Kant's Insight, which undermines the givenness thesis. Therefore, an account that provides for what is needed cannot appeal to any of the empiricist resources undermined by Kant's Insight, specifically not to the givenness thesis.

If these considerations are right, then the Deduction should both (i) suggest an adequate successor account to epistemic compositionism and (ii) address Kant's Puzzle. In the next section, I show that those elements of the Deduction that compositionist readers tend to discount are aspects of an argument precisely to this effect.

7. Making sense of the Transcendental Deduction as a whole

Here, I provide a reading of the Deduction that can accommodate the elements that compositionist readers discount, by moving beyond epistemic compositionism. I develop my reading in two steps: First, I argue that part of the aim of the second stage of the B-Deduction is to think through the shortcomings of the compositional account in order to arrive at a more adequate successor account that overcomes epistemic compositionism, dissolves Kant's Puzzle, and indirectly dissolves Hume's Puzzle. Second, I contend that once the compositional reading has been overcome, its objections to the notion of synthesis dissolve. This explains how synthesis can be central to Kant's successor epistemology.

7.1. The argument of the second stage of the B-Deduction as a dissolution of Kant's Puzzle

Kant clearly thinks that both stages of the B-Deduction are necessary for it to accomplish its task. Having concluded the first stage, he writes, in §21: "in the above proposition [i.e. §20], therefore, the beginning of a *deduction* of the pure concepts of the understanding has been made" (*KrV*: B144).

The first stage is merely 'the beginning' because the B-Deduction can be read as exhibiting the following argumentative structure: Its first stage, amongst other things, invites a certain kind of objection, to which it and the A-Deduction are vulnerable on a compositional reading. And its

second stage then aims to show that to preempt this objection we need to overcome epistemic compositionality.³¹

On the compositional reading, the Deduction is vulnerable to what I call the *impositionist objection*. According to that reading, and in accordance with the givenness thesis of empiricism, operations of sensibility are intelligible independently of acts of the understanding. This implies that sensory presentations of objects, as what operations of sensibility by themselves provide, can be understood independently of acts of the understanding. Consequently, the categories come to appear to be forms that the mind imposes on the objects presented by our senses, in order to render them objects of judgement, but which as such have nothing to do with how the objects presented by our senses are themselves. Kant would thus not have shown that for it to be possible that there are empirical judgements at all *what sensibility presents must exemplify the categories*, but merely that *we must impose the categories on what sensibility presents*. For what sensibility presents can be understood independently of acts of the understanding, so that it itself could be entirely different from how we judge it to be in our judgements whose form corresponds to the categories. This however would contradict Kant's aim, namely to show that the categories are cognitively contentful. For, on this picture, rather than being exemplified by objects of the senses themselves, which would vindicate the categories as cognitively contentful, the categories would merely be *imposed on* such objects, thus subjectively reshaping those objects as objects of judgement, which, as such, would be reflective of acts of our mind, rather than of the sensory given. The categories would at best appear to be cognitively contentful, i.e. they would fall within the scope of Hume's Puzzle.³²

³¹ My reading of the Deduction along these lines is indebted to McDowell (2009; 2017) and Conant (2016). See also Kern (2018: 231/2, 235-8). Rather than being an exhaustive account of the Deduction's argument, this reading focuses on the strand of it that aims to overcome epistemic compositionality.

³² As we saw, this kind of objection is sometimes raised against Kant as a reason for questioning whether the Deduction achieves the dissolution of Hume's Puzzle that it seemed to promise (cf. §5.1, ns. 17, 23, 29).

Faced with this objection compositionalist readers have the choice between two equally unattractive options: Either they can accept that Kant fails to respond to Hume's Insight and is open to the impositionist objection (cf. n.23); or they can argue that the Deduction does not aim to respond to Hume's Insight by showing that what sensibility presents *must actually exemplify* the categories, but instead merely has the weaker aim of showing that *we must apply* the categories to what sensibility presents for it to be possible that there are empirical judgements at all.³³

The first option is unattractive because it goes against the supposed motivation for reading Kant compositionally, namely the supposed ability of epistemic compositionism to avoid the intellectual projectivism that leads to Hume's Puzzle (cf. §3). For, if the impositionist objection is granted, then Kant seems to be committed to a categorial projectivism that undermines the intelligibility of our empirical judgements as genuine knowledge. That is, like Hume, he would be unable to hold on to the epistemic thesis of empiricism.

The second option is unattractive because, as we saw, it is Hume's Insight that Kant takes to make his Deduction necessary. However, even putting this aside, the weaker reading of the Deduction's aim leaves Kant open to the impositionist objection. This is unattractive both for the above reasons and because it does not fit the text. For, §27 – which states the result of the Deduction – provides evidence that any reading that is open to the impositionist objection cannot be what Kant is arguing for. He there points out that, if the result of the Deduction is vulnerable to this objection, that “is precisely what the skeptic wishes most, for then all our insight through the supposed objective validity [i.e. cognitive contentfulness] of our judgements is nothing but sheer illusion” (*KrV*: B168). This shows that Kant himself realizes the threat this objection poses. Now, as we saw, the source of the impositionist objection is the compositional account of knowledge. Hence, it cannot be right to read Kant both as being alive to this objection, and as holding on to the

³³ For an influential reading to this effect, see Allais (2011: 102-6; 2015: Ch. 11).

compositional account.³⁴ Instead, §27 suggests that it is Kant's aim to preempt the impositionist objection by proposing an adequate successor to epistemic compositionism.

The second stage of the B-Deduction includes the preemption of the impositionist objection. For, it establishes that the categories, as expressions of the forms of the understanding, are exemplified by any object presented by intuition whatsoever, because the forms of intuition, space and time, are not forms of unity that are intelligible independently of the forms of the understanding. The second stage thus overcomes the compositional reading's assumption, due to the givenness thesis of empiricism, that space and time are principles of unity that are intelligible independently of the categories, and thus moves beyond epistemic compositionism, which claims that operations of sensibility are intelligible independently of acts of the understanding.

The first stage of the B-Deduction is concerned with the relation of the understanding to a manifold of sensory presentations, abstracting from the particular form of those presentations. It shows *that* the categories must be exemplified by the objects presented by any intuition that is to provide the content of our judgement. The second stage lifts the first stage's abstraction, to investigate how *our* forms of intuition relate to the forms of judgement. It shows *how* and *why* the categories are exemplified by the objects presented by intuitions, thus explaining the cognitive contentfulness of the categories. The second stage thus reconsiders our forms of intuition, which were described in the Aesthetic, in light of what we learned in the first stage – that for intuitions to present mind-independent objects for judgement they must exhibit a unity that conforms to the categories – with the aim of preempting the impositionist objection by abandoning the givenness thesis and thus overcoming epistemic compositionism.

³⁴ Robert Pippin acknowledges that the impositionist objection goes against Kant's aims and links it explicitly to the compositional reading. However, he sees no way around reading Kant compositionally (cf. Pippin 1982: 227/8).

Contrary to the interpretation offered to compositionalist readers above, the second stage is thus not concerned with *whether our human sensible intuition presents objects that exemplify the categories*, but with *how our human sensible intuition presents objects*, i.e. with the forms of human sensible intuition, space and time, themselves (cf. §5.2; *KrV*: B144/5). Accordingly, while the first stage considers the categories as *intellectual conditions* on the presentation of objects, the second stage considers the *sensible conditions* under which such objects are presented to us for judgement.³⁵

Kant says as much in §21:

[I]n [...] [this first stage], since the categories arise *independently from sensibility* merely in the understanding, I must abstract from the way in which the manifold for an empirical intuition is given, in order to attend only to the unity that is added to the intuition through the understanding by means of the category. In the sequel [i.e. the second stage] (§26) it will be shown from the way in which the empirical intuition is given in sensibility [i.e. spatio-temporally] that its unity can be none other than the one the category prescribes to the manifold of a given intuition in general [...]; thus by the explanation of its [i.e. the category's] a priori validity in regard to all objects of our senses the aim of the deduction will first be fully attained. (*KrV*: B144-5, my underscoring; cf. A79/B104-5, B159)

Here, Kant states that in the second stage, he aims to show that intuition and judgement share the same principle of unity; or, what comes to the same, that the categories, which correspond to the forms of judgement, are exemplified by any object presented by intuition (cf. *KrV*: A112, B138, B159, A158/B197).

The reason that Kant claims that to ‘attain our aim’ – to show that the categories are cognitively contentful – we need to show that the categories are exemplified by ‘all objects of our senses’, i.e. by any object presented by intuition, is the following: The categories are cognitively contentful only if they are exemplified by the objects presented by intuition. However, if the categories were not exemplified by ‘all objects of our senses’, i.e. by any object presented by intuition, this would

³⁵ For a reading to this effect, see Longuenesse (1998: 213). It might be objected that this reading seems to be contradicted by the title of §24: “On the application of the categories to objects of the senses in general.” However, Kant’s topic in §24 is the relation between (a) the sensible synthesis of the imagination as the function by means of which our sensibility presents mind-independent objects; and (b) the categorial synthesis of the understanding as the function by means of which such sensibly presented objects are objects of judgement. I return to this below.

imply that (at least) some of those objects exhibit principles of unity other than the categories. Consequently, rather than being exemplified by the objects themselves that intuitions present, i.e. being reflective of mind-independent reality as such, the categories would be mere subjective impositions on those objects.

The anti-impositionist argument of the B-Deduction's second stage includes a dissolution of Kant's Puzzle. For it explains *how* and *why* the categories are exemplified by the objects of intuition themselves: namely, because these objects can only be given to us in intuitions that are unified by functions of the understanding that can be expressed in terms of the categories, so that without this unity provided by functions of the understanding our sensory consciousness would be unable to present us with mind-independent objects. But if sensory consciousness did not present mind-independent objects, that would raise Kant's Puzzle.³⁶

Kant aims to dissolve Kant's Puzzle by showing that the same original principle of unity underlies both space and time, as forms of intuition, and the categories, as concepts of an object in general; or equivalently, that the categories are exemplified by all objects presented by our senses because the same functions of the understanding that the categories express also unify intuitions (cf. *KrV*: B159-60). He thus seeks to establish simultaneously and reciprocally: (i) that the categories have cognitive content, i.e. are exemplified by any object presented by intuition, because the categories are an expression of the same function that is manifest in the spatio-temporal unification of intuitions themselves (thereby responding to Hume's Insight), and (ii) that intuitions have objective purport, i.e. present objects, because their principles of unification manifest the same function of the understanding that the categories express as the concepts of an object in

³⁶ It might be objected that, since, in §13, Kant himself seemingly raises the possibility of there being (thin) empirical intuitions that do not involve the categories, he cannot be concerned with Kant's Puzzle (cf. §5.2; *KrV*: A90-1/B122-3, B162). However, in §13 Kant raises this possibility in the grammatical mood of *Konjunktiv II*, which is usually used to express imagined situations that are impossible. Hence, rather than raising a genuine possibility, Kant seems to describe a merely seeming possibility, which the B-Deduction's second stage is supposed to unmask as no genuine possibility at all. For more on this, see Conant (2016: 101-6).

general (thereby addressing Kant's Insight and dissolving Kant's Puzzle) (cf. *KrV*: A112, B138, A158/B197).

The B-Deduction establishes this – as the last quoted passage promises – in §26. Kant writes:

Space and time are presented *a priori* not merely as *forms* of sensible intuition, but also as *intuitions themselves* (which contain a manifold [of their own]), and thus with the determination of the *unity* of this manifold in them (see the Transcendental Aesthetic).ⁿ Thus [...] a combination with which everything that is to be presented as determined in space or time must agree, is already given *a priori*, along with (not in) these intuitions. (*KrV*: B160-1, my underscoring; cf. B121-2, B134-5)

Kant reminds us that we can construct pure intuitions – like the intuition of a triangle – in space and time, but that such pure intuitions presuppose not only space and time as forms of intuition but also our ability to intuit space and time in general as that which we delimit in each such act of construction in intuition (cf. *KrV*: A223/B271, A240/B299, A713/B741). These intuitions of space and time in general – we can call them *original intuitions* because they underlie any intuition – are ‘combinations’, i.e. they presuppose an act of synthesis. For instance, for the original intuition of space to present all possible spatial locations as parts of one space, the capacity for ‘combination’ or synthesis – for unifying in apprehension the parts of a whole as one – must be in act. The original intuitions are combinations of the *a priori* given manifold characteristic of pure intuitions, combined in accordance with a principle of unity that enables us to apprehend this manifold as *a priori* determinations of space and time in general, i.e. as possible spatial locations and temporal moments (cf. *KrV*: B40, B136n., B160-1n.). Kant notes that the relevant principle of unity is ‘*not* given *a priori in*’ the original intuitions, but that it is ‘given *a priori along with*’ these intuitions (cf. *KrV*: B129-30). That is, rather than being given as the content of the original intuitions, the relevant principle of unity informs the act of synthesis that is presupposed by the unity of those intuitions (cf. *KrV*: A22-5/B37-40).

About this principle of unity Kant remarks in the second sentence of the footnote appended to the first sentence of the quoted passage:

In the Aesthetic I ascribed this unity merely to sensibility, only in order to note that it precedes all concepts, though to be sure it presupposes a synthesis, which does not belong to the senses but through which all concepts of space and time first become possible. (*KrV*: B160-1n., my underscoring)

Kant here tells us that the principle of unity that informs the acts of synthesis presupposed by the original intuitions of space and time in general is a function of the understanding, rather than of sensibility. This is so because synthesis is the characteristic act of the understanding, which is the sole source of unity in presentations (cf. *KrV*: A68-9/B93-4, B129-30, B134n., B134-5, B159).³⁷ Consequently, just as the categories, as concepts of an object in general, are expressions of the function of the understanding, so space and time, as the forms of an intuition of an object in general, are intelligible only in an act of that same function of the understanding.

Kant distinguishes these two manifestations of the same function as (a) the *sensible synthesis of the imagination*, which unifies a possible sensory manifold into a *non-conceptual* intuition of a mind-independent object in conformity with space and time; and (b) the *categorial synthesis of the understanding*, which unifies the same manifold into a *conceptually reflected* intuition of a mind-independent object in conformity with the categories as concepts of an object in general (cf. *KrV*: A77-9/B103-4, B151-2). Furthermore, he states that the function that manifests itself in the synthesis of imagination has its origin in the understanding, explaining that the imagination is “a function of the understanding” (*KrV*: marginal addition at B103) and “an effect of the understanding on sensibility” (*KrV*: B152). Operations of sensibility that provide intuitions do so because they essentially involve an act of the understanding that unifies their sensory manifold into a non-conceptual, yet conceptualizable, intuition. So, while space and time and the categories are

³⁷ For the argument for this claim, see Ch. IV.3.

forms of unity that differ in kind from each other, both are essentially manifestations of the same original function of the understanding (cf. B134 n.).^{38, 39}

By showing that the same original function of unity underlies both space and time, as forms of intuition, and the categories, as the concepts of an object in general, Kant shows simultaneously: (i) that the categories are exemplified by all objects presented by intuitions, and thus have content, because they are an expression of the same function of unity that is manifest in the spatio-temporal unification of intuitions, thus responding to Hume's Insight; and (ii) that intuitions have objective purport because they manifest the same function of unity that is expressed in the categories as concepts of an object in general, thus responding to Kant's insight and dissolving Kant's Puzzle.⁴⁰

Accordingly, contrary to the compositional reading, the Deduction does not aim to establish that (thin) empirical intuitions are able to present mind-independent objects that fall under the categories, in order to vindicate (thin) empirical intuitions as a self-standingly intelligible component of empirical knowledge that can explain the claim of our empirical judgements to knowledge and dissolve Hume's Puzzle (cf. §4.2). Nevertheless, the Deduction still indirectly implies a dissolution of Hume's Puzzle. For, it explains how it is possible to understand our empirical judgements as knowledge: namely by understanding that such judgements manifest the

³⁸ I cannot here provide a sustained reconstruction and evaluation of the argument of the second stage of the B-Deduction, doing so would require a sustained examination of Kant's treatment of synthesis and its species, which will be the topic of the next chapter. For important work on this with regard to the argument of the Deduction, see e.g. Longuenesse (1998) and Kitcher (2011).

³⁹ On my reading intuitions are not unified by the categories, i.e. intuitions do not have conceptual form. For, while any principle of unity has its source in the understanding, not every such principle is conceptually reflected, as the categories are. Intuition is non-conceptual, but since the principle governing its synthesis is a manifestation of the same original function of the understanding which the categories are conceptual expressions of, the categories are exemplified by objects presented by intuition, and thus can be used to conceptualize them (cf. *KrV*: B121/2). Hence, my reading does not conflict with the difference in kind between forms of unity of intuitions and of concepts (cf. n.11) For similar points, see e.g. Land (2011) and Conant (2016: 113-7).

⁴⁰ This suggests that Kant's a priori reflection that establishes the cognitive contentfulness of the categories, and the transcendental argument that substantiates this reflection, are only an aspect of the Deduction's overall argument. Accordingly, it is unsurprising that transcendental arguments considered independently of epistemic hylomorphism have been found wanting. Those with an interest in transcendental arguments should therefore explore the epistemic hylomorphism that is their original home (cf. n.29).

same function of unity as empirical intuitions that present mind-independent objects, so that, in accordance with the epistemic thesis of empiricism, such intuitions can vindicate judgements made on their basis as knowledge.

Overcoming epistemic compositionism dissolves the objection that compositionist readers make against the second stage of the B-Deduction. They claim that Kant errs when he attempts to represent space and time and the categories as manifestations of the same original principle of unity (cf. §5.2). This reflects their assumption that space and time are intelligible independently of the categories, based on the givenness thesis as the fundamental assumption of epistemic compositionism. However, as we saw, it is exactly this fundamental assumption that the second stage of the B-Deduction attempts to overcome. On my reading, Kant's Deduction explicates the cooperation between sensibility and understanding in a manner that is responsive to both Hume's and Kant's Insight. The Deduction moves beyond empiricism *not only* by replacing the semantic thesis of empiricism with Kant's transcendental semantic thesis, but *more radically* by also abandoning the givenness thesis of empiricism and replacing it with what I call the *hylomorphic thesis*:

[HYLOMORPHIC THESIS] Operations of sensibility provide a sensory manifold as the matter, and acts of the understanding provide space and time as the form, of sensory consciousness that seems to present objects.

In establishing this, the Deduction overcomes epistemic compositionism in favor of epistemic hylomorphism, which is captured by Kant's hylomorphic and transcendental semantic thesis, plus the epistemic thesis of empiricism. But, before developing this epistemic hylomorphism, I want to briefly revisit the compositional reading's objections to the notion of synthesis.

7.2. The role of synthesis in the Transcendental Deduction

Overcoming the compositional reading also enables us to account for the centrality of synthesis.

The compositional reading is confronted with the alleged dilemma that either (a) the susceptibility of the ‘sensible given’ to synthesis leads to a regress of different kinds of syntheses, or (b) the ‘sensible given’ is a ‘characterless given’ (cf. §5.1). However, this is a problem only in light of the assumption that intuition is self-standingly intelligible, i.e. must have its very own character or principle of unity, intelligible independently of the principle of unity of judgements. However, it is this very assumption, expressed by the givenness thesis of empiricism, that my reading of the Deduction denies. Instead, on my reading a synthesis enformed by the same *original function of unity* underlies both the unification of sensory consciousness of a mind-independent object in accordance with the *forms of intuition* and the unification of a judgement about that object in accordance with the forms of judgement (cf. §7.1). Consequently, rather than a regress of different kinds of syntheses, there is only one original function of unity informing any synthetic act of the understanding. Furthermore, as for the second horn of the dilemma, we saw that Kant agrees that a *mere* ‘sensible given’, i.e. what is given by operations of sensibility by themselves, would indeed be characterless, i.e. nothing at all. This, after all, is Kant’s Insight which animates Kant’s Puzzle.

Similarly for the alleged dilemma regarding whether or not empirical intuitions involve the categories, which leads proponents of the compositional reading to distinguish two kinds of empirical intuition: (a) *thin empirical intuitions* that do not involve the categories, which are introduced in the Aesthetic, and (b) *thick empirical intuitions* that involve the categories, which are introduced in the Deduction (cf. §5.2). While the Aesthetic provides a preliminary understanding of intuition, intuition comes into proper view only in the Deduction, where space and time, as the forms of intuition, are revealed not to be intelligible independently of the original function of the understanding, which can also be expressed in the categories (cf. §7.1).

The fundamental compositionalist assumption that (thin) empirical intuition constitutes a self-standingly intelligible sensory component of empirical knowledge is what leads compositionalist readers to focus on Hume's Puzzle to the exclusion of Kant's Insight, and what enables them to dismiss the notion of synthesis that is crucial to tackling Kant's Insight as superfluous. However, as we saw, from the standpoint of Kant's Insight, the compositional reading is not an intelligible account of empirical knowledge at all (cf. §6). For from that perspective the problem is that there is *no* mere 'sensible given', i.e. no thin empirical intuition that presents mind-independent objects that could contribute to vindicating our judgements about mind-independent objects as knowledge. Consequently, the question is not how synthesis can have a bearing on the 'sensible given', but instead how there can so much as be a 'sensible given', i.e. how empirical intuition that has any objective purport at all is so much as possible. It is this more radical question, animating Kant's Puzzle, that Kant aims to address in the Deduction by exploiting different species of synthesis informed by the same original function of unity. Consequently, synthesis is not a mere 'brute', and unconvincing, 'fact' posited as a non-essential element in a transcendental argument responding to Hume's Puzzle. On the contrary, it is the heart of Kant's account of the original unity of the forms of judgement and intuition, which aims to simultaneously provide a response to Hume's and Kant's Insights in order to dissolve Kant's Puzzle. As such, synthesis will be the topic of the next chapter.

8. The hylomorphic reading of Kant's account of empirical knowledge

Having presented a reading of the Deduction that substantiates my claim that it aims to overcome compositionism in favor of hylomorphism, I here say more about the hylomorphism that I find in Kant and show how it can accommodate the considerations that compositionists take to motivate their interpretation.

My reading entails the following two features of epistemic hylomorphism as Kant's successor account to epistemic compositionism: (i) Kant explains how it is intelligible that the categories

are cognitively contentful in terms of their being exemplified by what is presented in any possible operation of sensibility, thus responding to Hume's Insight, which questions how it is intelligible that our conception of something mind-independent has any cognitive content. (ii) He explains how it is intelligible that intuitions have objective purport in terms of the essential involvement of acts of the understanding in their constitution, thus responding to Kant's Insight, which questions how it is intelligible that our intuitions have objective purport. Kant's account thus explains (i) the cognitive contentfulness of acts of the understanding, by recourse to the objective purport of operations of sensibility, and (ii) the objective purport of operations of sensibility, by recourse to cognitively contentful acts of the understanding.

Despite this mutual dependence of the intelligibility of operations of sensibility and acts of the understanding, the account respects the difference in kind between sensibility and understanding. It does this by endorsing epistemic hylomorphism. As Stephen Engstrom puts it: "Kant characterizes the distinction between understanding and sensibility as one between form and matter." (Engstrom 2006: 21) Even a cursory reading of the first *Critique* reveals the concepts of *form* and *matter* as central to how Kant frames and executes his epistemological project. He even states that the intention of his philosophy is best captured by calling it "formal idealism", to emphasize the aspect of it that distinguishes it from "material idealism", which "doubts or denies the existence of external things" (*KrV*: B519 n.; *Prolegomena*: 375).

Kant explains that the concepts of "matter" and "form" respectively signify "the determinable in general" and "its determination" (*KrV*: A266/B322). That is, to be matter is to be able to be determined by some form, and to be form is to be able to determine some matter. As such, the matter and form of something essentially depend on each other for their intelligibility: to be the matter of something is to be that in it that is determined by form, and to be the form of something is to be the determination of its matter. The matter and form of something constitute a *hylomorphic*

unity that grounds the intelligibility of its matter and the intelligibility of its form: that is, an *original* unity, whose elements are abstractable *aspects* of that unity, which depend for their intelligibility on that unity and thus on each other. For instance, for something to be understood as the matter of an organism, i.e. as organs, is for it to be understood to be determined as such by the form of that organism, i.e. by a specific form of living being, and for something to be understood as the form of an organism is for it to be understood as determining the matter of that organism as its organs.⁴¹

The difference between compositionism and hylomorphism thus is the following: On the compositional account operations of sensibility and understanding are distinct elements in a cognitive process that are conceptually *separable* from one another, with one sort of intellectual form (or ‘structure’), i.e. concepts, being imposed on an independently available sensory matter (or ‘material’), i.e. (thin) empirical intuitions. By contrast, for Kant the relevant concepts of matter and form presuppose one another, so that neither operation is intelligible apart from the other, and each is only *abstractable* from their original unity in intuiting. Accordingly, the Deduction is an a priori articulation of intuition as an original unity of given sensory matter and synthetic intellectual form,

⁴¹ Kant’s understanding thus contrasts with the understanding of <matter> and <form> that underlies compositional readings. Such readings assume that the concepts of matter and form respectively signify ‘material’ and ‘structure’, where these two terms signify notions that are each independently intelligible, apart from the compound that their joint combination yields (cf. Cassam 2007: 123/4; Campbell & Cassam 2014: 174/5; Falkenstein 1995). On this conception, to be matter is to be material that is able to exhibit different structures, and to be form is to be structure that is able to structure different materials. As such, the matter and form of a specific thing merely accidentally depend on each other for their intelligibility: for something to be the matter of something is for it to be a quantity of a specific material that, while in this instance it happens to be structured by this structure, can also exhibit different structures, and for something to be the structure of something is for it to be a specific structure that, while in this instance it happens to structure this material, can also structure different materials. The matter and the form of something thus constitute a *compositional unity* as the *product* of material and structure. That is, an *aggregate* unity, whose elements are *components* of that unity, which can be understood independently of that unity and thus of each other. For instance, for something to be understood as the matter of a specific kind of molecule, i.e. as specific kinds of atoms, is for it to be understood as a particular kind of material that, while in this instance it happens to be structured by this type of atomic bond, can also exhibit a different structure, i.e. be structured by a different type of atomic bond, and for something to be understood as the form of a specific kind of molecule, i.e. as a type of atomic bond, is for it to be understood as a structure that, while in this instance it happens to structure these kinds of atoms, can also structure different kinds of materials, i.e. different kinds of atoms.

in which space and time and the categories are revealed to be distinct abstractable formal manifestations of one and the same original synthetic determining function of the understanding.

Accordingly, rather than being two distinct separable cognitive capacities that contribute two distinct components to our knowledge each of which has a distinct form, sensibility and understanding are two abstractable aspects of a single capacity to know. That is, sensibility and understanding stand to each other as matter and form: sensibility is the *material* aspect of our capacity to know, by virtue of which it is a capacity to *receive* objects; and the understanding is the *formal* aspect of our capacity to know, by virtue of which it is a capacity to *think* those objects.⁴² The Deduction thus is an a priori ‘critique’ that overcomes epistemic compositionism by articulating the mutually dependent given sensory matter and synthetic intellectual form of intuition as acts of our originally unified capacity to know (*KrV*: Bxxxvi).

At this point compositionists might remind us of their systematic motivation for assuming compositionism. This motivation turned on the thought that, if operations of sensibility and the understanding could be understood only together, then operations of sensibility would essentially involve acts of the understanding. Compositionist readers of Kant took this to undermine the intelligibility of the idea that operations of sensibility provide for the objectivity of judgement required for judgement to be knowledge, i.e. as entailing an unacceptable intellectual projectivism that leads to Hume’s Puzzle (cf. §3).

However, my criticism of compositionism has already shifted the burden of proof by showing that compositionism is no better off. For, as we saw, it itself is unable to avoid intellectual projectivism and thus to hold on to the epistemic thesis of empiricism (cf. §7.1). But what is more

⁴² Kant suggest that sensibility and understanding are originally one, when he writes, reflecting on the systematic nature of pure reason: “We [...] begin only at the point where the general root of our power to know divides and branches out into two stems, one of which is *reason*. By “reason” I here understand, however, the entire higher faculty of cognition [i.e. including the understanding]” (*KrV*: A835/B863, my underlining; cf. A15/B29).

important is that the supposed objection in favor of compositionism itself depends on the implicit assumption of a *compositionalist conception of objectivity*, while it dissolves in light of the alternative conception of objectivity that accompanies Kant's hylomorphism.

The compositionalist conception of objectivity equates objectivity with absolute mind-independence. Accordingly, compositionists read the claim of the epistemic thesis of empiricism that when all goes well *sensory consciousness vindicates* empirical judgements as knowledge as the claim that for any judgement to be empirical knowledge it must *conform to the objects that sensibility by itself supposedly presents*. I call this reading of the epistemic thesis the *compositional epistemic thesis*:

[COMPOSITIONAL EPISTEMIC THESIS] Sensory consciousness can vindicate empirical judgements as knowledge because judgements conform to the objects that sensibility by itself presents.

It is against this compositionalist background that the claim of the hylomorphic thesis that operations of sensibility and the understanding can only be understood together seems to entail an intellectual projectivism that entails Hume's Puzzle and undermines the compositional epistemic thesis (cf. §3).

However, I have argued not only for the untenability of this compositionalist background (cf. §§5-7), but also for hylomorphism as the alternative that emerges from the insight into this untenability (cf. §§7 & 8). According to this alternative, while it is true that (i) the understanding can only be understood as able to make empirical judgements at all because of what sensibility presents, (ii) sensibility can only be understood as presenting objects because the understanding unites its operations in a manner expressible in terms of the categories. Against this alternative hylomorphic background the epistemic thesis of empiricism merely asserts what, according to the hylomorphic reading, the Deduction aims to explain, namely that the intelligibility of the possibility of intuition depends on an original agreement between the forms of sensibility and understanding. I call this the *hylomorphic epistemic thesis*:

[HYLOMORPHIC EPISTEMIC THESIS] Sensory consciousness can vindicate empirical judgements as knowledge because there is an original agreement between the forms of sensibility and the forms of the understanding.

Kant's epistemic hylomorphism fundamentally reconceives our very conception of objectivity, enabling us to read the epistemic thesis of empiricism hylomorphically rather than compositionally, thus avoiding the supposed threat of the intellectual projectivism that entails Hume's Puzzle . It does this as follows: On the hylomorphic reading, even though intuitions *share the form* of acts of the understanding in general, they are still objective because their objects *materially exist independently* of any specific act of the understanding. Thus, while the *possibility* of intuition *in general* depends on the same fundamental synthetic function of the understanding responsible for their determining *form*, the *actuality* of any *specific* intuition depends on specific operations of sensibility providing its determinable *matter*. Kant thus aims to reconcile idealism and realism by distinguishing formal and material conditions of intuition. His goal is to show that a *formal agreement* of subject and object, recognized in the *active synthetic determination* of sensory consciousness, i.e. a *formal idealism*, is complementary to a *material difference* of self and other, recognized in the *passive sensory affection* of such consciousness, i.e. a *material realism*. According to epistemic hylomorphism, then, intuitions are of an object that the subject, from an intellectual function expressible in the concept of it as the very objects it is *affected by*, *determines*; hence the object of intuition, although it must be given from elsewhere in order to be intuited, must conform to the subject's concept of it.⁴³

Compositionalist readers of Kant might retreat to the claim that, since Kant expounds the Aesthetic prior to and independently of the Analytic, he must think that sensibility is intelligible independently of the understanding. However, Kant nowhere says that any part of the *Critique* can

⁴³ Kant points to this when, against the compositional epistemic thesis that "our knowledge has to conform to the objects", he emphasizes the Copernican thought that "the objects have to conform to our knowledge", thus pointing to the hylomorphic epistemic thesis (*KrV*: Bxvi).

be understood independently of any other. On the contrary, he explicitly notes in the Discipline of Pure Reason that philosophical definitions – such as that of ‘intuition’ – must gradually come into view over the course of philosophical enquiry (cf. *KrV*: A730-1/B758-9).

Moreover, Kant explains that in the Aesthetic we “separate off everything that the understanding thinks through its concepts” (*KrV*: A22/B36). That we have to ‘separate off’ the understanding from sensibility suggests that sensibility is not originally separate from the understanding. This fits the idea that sensibility and the understanding are aspects of a single capacity to know, which can only be articulated into its sub-capacities by philosophical abstraction (cf. *JL*: §6). So, while Kant’s initial introduction of his account of knowledge can seem to confirm compositionism, it actually fits better with the hylomorphism that, I have argued, gradually emerges.

9. Conclusion

Having learned from the previous chapters of this dissertation that an adequate vindication of empirical judgement as knowledge has to take into account both the self-consciousness of judgement and the receptivity of operations of our senses, we set out in this chapter to understand Kant’s conception of the interplay of sensibility and understanding in providing us with empirical knowledge. We saw that, in light of Kant’s deepening of Hume’s Insight into Kant’s Insight, we cannot understand the cooperation between sensibility and understanding compositionally, i.e. we cannot understand sensibility by itself as affording us intuitions of mind-independent objects that can ground empirical knowledge. Instead, our reflection on the Transcendental Deduction revealed that to understand sensibility as affording us a basis for empirical knowledge, we need to conceive of the cooperation between sensibility and understanding hylomorphically, i.e. we must conceive of sensibility and understanding respectively as the material and the formal aspects of a single capacity to know.

We have thus learned that for empirical knowledge to be intelligible at all, intuition must essentially involve both a determinable material operation of sensibility and a determining formal act of the understanding. While it is easy to see that the material aspect of intuition consists in sensory affection, it is harder to see what its formal aspect would look like. Accordingly, the aim of the next chapter is to provide a detailed positive explanation of the nature of this formal aspect, thus further substantiating Kant's hylomorphic account of empirical knowledge.

However, before moving on to this task, I want to conclude with some brief observations about the implications of this chapter's findings for epistemology and philosophy of mind generally.

In contemporary epistemology, Kant is commonly seen as the progenitor of anti-skeptical transcendental arguments. However, as we saw, such arguments are not something that Kant would recognize as his main achievement. For, Kant is not primarily interested in responding to the epistemic skepticism that exercises much modern and contemporary epistemology; instead, he brings out how this skepticism depends on a more radical insight, namely Kant's Insight. Furthermore, we saw that, once we appreciate this insight, this undermines the intelligibility of epistemic compositionality, thus making it a pressing task for epistemology to understand and develop the underexplored hylomorphic successor account.

In contemporary philosophy of mind, Kant's account of knowledge is often discussed in terms of debates in the philosophy of perception, such as the conceptualism vs. non-conceptualism controversy⁴⁴, or the dispute between representationalist and relationalist accounts of perception⁴⁵. However, since these debates generally presuppose epistemic compositionality, Kant's hylomorphism does not fit with (and arguably even undermines) them.

⁴⁴ For conceptualist readings of Kant, see e.g. McDowell (1998) and Abela (2002); for non-conceptualist readings, see the texts cited in n.3.

⁴⁵ For relational readings of Kant, see e.g. Allais (2015) and Gomes (2017).

For example, whether Kant is a conceptualist or non-conceptualist regarding the cognitive content of sensory consciousness turns on the question whether the understanding is involved in intuitions as operations of sensibility (cf. Gomes 2014: 4/5). However, as we saw, while there is a sense in which Kant takes the understanding to be essentially synthetically active in intuition, this activity is not of the conceptual nature at issue for the contemporary conceptualist.

Similarly, whether Kant conceives of sensory consciousness in relational or representational terms hangs on the question whether intuitions essentially involve representational properties or non-representational relations to objects (cf. Gomes 2014: 15). However, as we saw, for Kant intuition essentially involves both: form that can be expressed in concepts which, given received matter, enable us to represent objects; and matter that results from sensory affection which, given synthesizing form, relates us to objects: i.e. intuition is both contentful and relational.^{46, 47}

⁴⁶ This gloss echoes the title of McDowell (2013): “Perceptual Experience: Both Contentful and Relational”.

⁴⁷ Anil Gomes argues that Kant could be read as holding that the properties of intuition essentially involve *both* representational properties and non-representational relations to objects. However, he conceives of the relational and representational ‘components’ of intuition as intelligible independently from each other, rather than as mutually dependent, thus falling short of the hylomorphic reading (cf. Gomes 2014: 18/19).

IV. KANTIAN REASONING AND SELF-CONSCIOUSNESS

Synthesis as the form of knowledge

Unity means the combination of different determinations; Kant thus calls thought synthesizing, combining. But thought already contains in itself, in its determinations, such combinations; it is a unifying, a unification of differences. The differences are matter, which is given through experience; and to combine this matter, there must already in the subjective determinations be the predisposition to be able to combine them (*VLGP III*: 336, my translation).

1. Introduction

The previous two chapters of this dissertation showed that we cannot understand a purely receptive operation of sensibility (or mere sensory affection) as sufficient to yield intuition, i.e. episodes of sensory consciousness that are able to provide the understanding with sensory presentations of mind-independent objects. Instead, we saw that we must understand intuition as having both a sensible and an intellectual aspect, i.e. as essentially involving both a determinable material operation of sensibility and a determining formal act of the understanding. That is, for intuition to be able to figure as a basis for empirical knowledge, we must understand it *hylomorphically*.

We have thus seen negatively that for empirical knowledge to be intelligible at all, intuition must essentially involve a determining act of the understanding – sensible synthesis – as its formal aspect. However, we have not yet positively considered the nature of this determining act as the formal aspect of knowledge. The aim of this chapter is to provide a positive account of the nature of this formal aspect, thus further substantiating Kant’s hylomorphic account of knowledge. Specifically, the goal is to give an account of the formal aspect not merely as the formal aspect of intuition, i.e. as sensible synthesis; but generally as the formal aspect of any act involving determination by the understanding, i.e. as intellectual synthesis in general.¹

¹ Kant writes: “[W]e must distinguish that which belongs to the *matter* in our knowledge and is related to the *object* from that which concerns its *mere form*, as that condition without which a knowing (*Erkenntnis*) would in general never be a knowing.” (*JL*: 50, my translation)

To this end, I proceed in three steps: The first step considers the formal aspect of knowledge in general. I distinguish pure general from transcendental logic, show that for Kant the formal aspect of knowledge in general or the logical function of the understanding in general is the function of unity in judgement, and identify this function as intellectual synthesis (§2). Furthermore, I reconstruct Kant's general account of synthesis and bring out its essentially hylomorphic nature (§3).

The second step shows that inference is a species of intellectual synthesis, and, in light of this, develops a detailed synthetic account of inference that can dissolve a prominent puzzle regarding the nature of inference, thus further substantiating both the account of synthesis as the formal aspect of knowledge in general and the philosophical fruitfulness of Kant's hylomorphism (§4). Specifically, I first show that intellectual synthesis, as the logical function of the understanding in general, has three species: conceiving, judging, and inferring (§4.1). Second, I review two prominent competing contemporary conceptions of inference, identify them as compositional, and reconstruct a puzzle that results from their opposition (§4.2). Third, I follow Kant in conceiving of inference as an instance of synthesis, and show how the resulting hylomorphic conception of inference can dissolve the puzzle of inference (§4.3).

The last step argues that by understanding synthesis as the formal aspect of knowledge in general we can understand our capacity to know not just as a capacity to know mind-independent objects in individual and unconnected judgements based on intuition, but more completely as a capacity to inferentially unify those judgements into a science (§5). I conclude by summarizing the findings of this chapter and the dissertation (§6).

2. The logical function of the understanding in general

Here, I distinguish pure general from transcendental logic, show that, according to Kant, the formal aspect of knowledge in general or the logical function of the understanding in general is the function of unity in judgement, and identify this function as intellectual synthesis.

On the hylomorphic account of empirical knowledge, our intuition essentially involves both a material and a formal aspect, i.e. sensibly given, determinable matter and intellectual, actively determining form (cf. Ch. III.8).

We saw that it is impossible to understand ourselves as conscious of sensibly given matter considered independently of any intellectual, active, determining form, i.e. as *mere matter*. Specifically, we saw that it is impossible to understand ourselves as conscious of specific sensations considered independently of their unification by possible manners of sensible synthesis, expressible in the categories, qua forms of intuition, i.e. independently of their being the matter of actual intuitions. This is because to understand ourselves as conscious of anything is to understand ourselves as conscious of something that is determined by some form, so that we cannot understand ourselves to be conscious of something determinable (i.e. matter) without it having any actual determination (i.e. form). For instance, we cannot understand ourselves to be conscious of specific sensations without understanding them to be determined as the matter of an intuition by possible manners of sensible synthesis, expressible in the categories, qua forms of intuition. *Mere sensibly given matter is unintelligible* (cf. Ch. II.5).

However, we saw that it is possible to understand ourselves as conscious of unifying intellectual form considered independently of any sensibly given, determinable matter, i.e. as *pure form*. Specifically, we saw that it is possible to understand ourselves as conscious of the possible manners of sensible synthesis, expressible in the categories, considered independently of their unifying

specific sensations, qua matter of intuition, i.e. independently of their being the form of actual intuitions. This is because we can understand ourselves to be conscious of possible determinations (i.e. form) of the determinable (i.e. matter) in general without thereby understanding those determinations as actually determining matter. For instance, we can understand ourselves to be conscious of the possible manners of sensible synthesis, expressible in the categories, without understanding them as determining specific sensations as the matter of an intuition. *Pure unifying intellectual form is intelligible* (cf. *KrV*: A64-6/B89-90).

We thus are able to give an account of intellectual form, specifically the categories, that abstracts from its being the form of any matter, specifically sensory matter. According to Kant, the science of intellectual form, considered independently of matter, is *logic* (cf. *KrV*: Bxxiii). He describes logic as “the science of the rules of the understanding in general” (*KrV*: A52/B76; cf. *JL*: 12) or “the self-knowledge of the understanding and reason” (*JL*: 14, my translation; cf. *JL*: 13).² Kant distinguishes between pure general logic, which abstracts from any matter at all, and transcendental logic, which abstracts from actual sensory matter. (cf. *KrV*: A76-7/B102, A131-3/B170-2).

Pure general logic “is [...] the self-knowledge of the understanding and of reason, but not regarding their capacities in regard to objects, but merely as to form.” (*JL*: 14, my translation & underscoring; cf. *KrV*: A53/B78) As such, pure general logic considers the rules of the understanding or intellectual form independently of any relation to objects in general, or as rules for or forms of acts of the pure understanding independently of any matter at all, which means

² In taking logic to be the science of the rules that govern the ‘acts (*Handlungen*)’, ‘functions’, or ‘use’ of the understanding in general Kant follows the tradition. Aristotelian logic investigates the rules of kinds of intellectual acts such as predicating, which is said to be a “combination” (*sunthesis*) of a noun and a verb (*De Int.*: 16a9- 18), and syllogism, or combination of predications (*sunlogoi*) (*An. Pr.*: 24a11). The *Port-Royal Logic* states that logic “consists in reflections that have been made on the four principal operations of the mind: *conceiving, judging, reasoning, and ordering*” (*PRL*: 23).

independently of actually determining any matter at all, as pure intellectual determinations, i.e. as “mere forms of thinking in general” (*JL*: 12, my translation & underscoring; cf. *KrV*: A52-5/B77-80, A131/B170; *JL*: §§ 5, 19).³ Pure general logic thus considers acts of the pure understanding alone, yielding self-knowledge of the understanding as a merely *logical capacity* to think in accordance with the rules of the understanding as mere forms of thinking.

Transcendental logic “deals with the rules of the understanding and reason, but merely in so far as they a priori relate to objects” (*KrV*: A57/B81-2). As such, transcendental logic considers the rules of the understanding or intellectual form in their essential a priori relation to objects in general, or as rules for or forms of acts of the understanding determining possible sensory matter, which means independently of actually determining any actual sensory matter, merely as possible determinations of sensory matter in general, i.e. as pure forms of knowledge in general (cf. *KrV*: A62/B87). Transcendental logic thus considers acts of the understanding in their essential a priori relation to sensibility, yielding self-knowledge of the understanding as a *cognitive capacity* to know in accordance with the rules of the understanding as pure forms of knowledge.

In accordance with the distinction between pure general and transcendental logic, Kant distinguishes the understanding’s logical use from its transcendental use (cf. *KrV*: A67/B92). The *logical use* of the understanding is its use as a capacity to think in accordance with the rules of the understanding as mere forms of thinking, which is the topic of pure general logic. The *transcendental use* of the understanding is its use considered in relation to operations of sensibility

³ Kant treats ‘thinking’ as the genus of which ‘judging’ and ‘knowing’ are species. Since thinking qua genus is broader than ‘judging’ and ‘knowing’ qua species of thinking, thinking, as mere conceiving, differs from judgement (and knowledge) in that it can be arbitrary, “I can *think* whatever I will, provided only that I do not contradict myself” (*KrV*: Bxxvi n.), while judgement cannot be arbitrary but must involve “something of necessity” (*KrV*: B104-5). For more on this see Engstrom (2009: 100-2). Kant sometimes refers to ‘judging’ and ‘knowing’ by means of the genus (cf. *KrV*: A69/B94, A73/B98, B145, A257/B304; *Prolegomena*: 304).

in general, i.e. as a capacity to know in accordance with the rules of the understanding as pure forms of knowledge, which is the topic of transcendental logic.

We have seen in the previous chapter that in the Transcendental Deduction Kant aims to show that the understanding considered transcendently, i.e. in its essential relation to sensibility, is a capacity to know mind-independent objects in general. That is, we have already articulated some transcendental logic, as the science of intellectual form considered in relation to sensibility, by giving part of a transcendental analytic of the pure concepts of the understanding (or categories) that demonstrated the cognitive contentfulness of these transcendental functions of the understanding.

However, our insight into the function of the understanding in general has so far been merely negative. For, we have only seen that Kant shows that for there to be intuition, as a basis for empirical knowledge, intuition must be enformed by the same function of the understanding that is also expressed in the categories, i.e. we have seen that Kant shows that intuition must involve a sensible synthesis of the imagination as its formal aspect (cf. Ch.III.7.1).

Now, pure general logic, as the science of mere intellectual form, promises to provide a positive understanding of the function of the understanding in general. Accordingly, this chapter focuses on the logical function of the understanding to gain a positive understanding of that function in general, i.e. to not only understand that function's manifestation in a specific kind of cognitive act, e.g. as sensible synthesis in intuition, but to understand it in abstraction from any specific kind of cognitive act, i.e. as intellectual synthesis in general.

In the Introduction to the Transcendental Analytic, under the heading 'On the logical use of the understanding in general (*Verstand überhaupt*)' Kant states that "We can [...] trace all acts of the understanding back to judgements, so that the understanding in general can be represented as the

capacity to judge (Vermögen zu urteilen).” (*KrV*: A69/B94, my translation & underscoring) He thus tells us that ‘all acts’ or functions of the understanding can be understood as acts of the capacity whose characteristic kind of act is judgement, so that ‘the understanding in general’ can be understood as the ‘capacity to judge’.⁴

Kant explains that logically considered, “[a]ll judgements are [...] functions of unity among our representations [...] and many possible knowings (*Erkenntnisse*) are thereby drawn together into one.” (*KrV*: A69/B94, my translation) That is, logically considered, judgement unifies representations⁵ and presents them as thus unified (cf. *Prolegomena*: 304). As such, judgement is an instance of synthesis. For, as we saw in the previous chapter, Kant explains that “*synthesis* in the most general sense [is] the action of putting different representations together with each other and comprehending their manifoldness in one knowing (*Erkenntnis*).” (*KrV*: A77/B103; Ch. III.5.1). That is, synthesis unifies representations and presents them as thus unified. This suggests that judgement, as the logical act of the understanding in general, qua capacity to judge, is *synthesis*, so that the understanding in general is a *capacity to synthesize* (cf. A80/B106).

This suggestion is supported by Kant’s claims: (a) that “the understanding [...] is itself nothing further than the faculty of combining *a priori* and bringing the manifold of given representations under [the synthetic] unity of apperception” (*KrV*: B135, my underscoring); and (b) that “this capacity [i.e. the synthetic unity of apperception] is the understanding itself” (*KrV*: 134 n.).⁶

⁴ I follow Longuenesse in translating ‘*Vermögen zu urteilen*’ as ‘capacity to judge’ (cf. Longuenesse 1998: 7/8, 2005: 18). The capacity to judge thus is the understanding in general. The understanding in general should not be confused with *the understanding* (in the strict sense) as the capacity to conceive, and the capacity to judge should not be confused with the *power of judgement (Urteilkraft)* as “the capacity to *subsume* under rules” (A132/B171, my translation). More on this taxonomy in §4.1 below.

⁵ For this chapter I revert to the standard translation of ‘*Vorstellung*’ as ‘representation’ (cf. Ch. III n.6).

⁶ These claims also fit with Kant’s insistence that the understanding in general is the sole source of unity in representations (cf. *KrV*: B129-30, B134-5; Ch. III.7.1; §3).

We thus see that the logical function of the understanding in general, i.e. the formal aspect of knowledge in general, is intellectual synthesis. Hence, to gain a positive understanding of the nature of the logical function of the understanding in general and thus of the formal aspect of knowledge in general, we need to investigate the nature of this synthesis. In the next section, I begin to do this by reconstructing Kant's general account of synthesis and highlighting its essentially hylomorphic nature.

3. Synthesis⁷

Having suggested that the formal aspect of knowledge in general is intellectual synthesis, I here reconstruct Kant's general account of synthesis and highlight its essentially hylomorphic nature.

As we saw, Kant defines synthesis as “the action of putting different representations together with each other and comprehending their manifoldness in one knowing (*Erkenntnis*).” (*KrV*: A77/B103) For Kant, synthesis thus *combines* individual, unconnected representations – manifold representations – and *comprehends* them *in one knowing*.

Kant further explains synthesis, writing:

[I]n addition to [i] the concept of the manifold and of its synthesis, [ii] the concept of combination also carries with it [iii] the concept of the unity of the manifold. Combination is the representation of the synthetic unity of the manifold. The representation of this unity cannot, therefore, arise from the combination; rather, by being added to the representation of the manifold, it first makes the concept of combination possible. (*KrV*: B130-1, my underscoring)

Kant here distinguishes three concepts: (i) ‘the concept of the manifold and its synthesis’, (ii) ‘the concept of combination’, and (iii) ‘the concept of the unity of the manifold’. On this basis, he highlights two important complementary aspects of combination or synthesis: (1) He notes that the ‘representation of the synthetic unity’, i.e. the concept of the unity of the manifold, first enables synthesis, so that it cannot be the result of the act of synthesis. And, (2) he states that the concept

⁷ My account of synthesis is indebted to Kitcher (2011: Ch. 8-10), Rödl (2013a & 2013b), and Held (2020: Ch. 3).

of the unity of the manifold is internal to and not independent of the act of synthesis: ‘combination is the representation of the *synthetic* unity of the manifold’. Hence, (1) the act of synthesis is not *external to and independent of* the representation of the synthetic unity; (2) it *includes* this representation, i.e. the concept of the unity of the manifold.

To see how Kant conceives of synthesis, let us reflect on each of these two aspects of it in turn:

In the quoted passage, Kant distinguishes two ways in which one might think that one can acquire the ‘representation of [a] unity’ of elements, i.e. ‘the concept of the unity of the manifold’. Either (a) this representation ‘arises from the combination’ of the elements, or (b) it precedes the combination of the elements and ‘cannot, therefore, arise from the combination’.

Kant thus distinguishes two ways in which elements can be combined, namely (i) as a combination whose concept is the result of the combination of its elements, i.e. an *aggregate*; and (ii) as a combination whose concept precedes the combination of its elements, i.e. a *system* (cf. *KrV*: A645/B673; *JL*: 72; *Prolegomena*: 322). Accordingly, ‘the concept of the unity of the manifold’ might be understood as either a concept of an aggregate or a concept of a system.

An example of an aggregate is a heap of stones that results from an avalanche of rocks.⁸ Here, how the particular stones are combined in this heap is accidental, so that there is no reason why a particular stone as an element of the heap has the particular position in the heap it does.⁹ Accordingly, none of the stones fulfill a specific function with regard to the heap as a whole. The concept of the heap results from the avalanche of rocks, so that the concept is external or accidental to the stones as elements of the heap.

⁸ I borrow the following examples from Held (2020: Ch. 3.2).

⁹ This does not mean that we cannot explain why some stone is where it is, but our explanation will have to appeal to factors beyond the stone as an element of the heap itself, e.g. the terrain, the weather, etc.

An example of a system is a wall built by a mason. Here, how the particular stones are combined in the wall depends on a concept of a wall in general, informing the mason's knowledge of wall building, so that there is a reason why a particular stone as an element of the wall has the particular position in the wall it does. Accordingly, each of the stones fulfills a supporting function with regard to the wall as a whole. The concept of a wall guides the mason's building of the wall, so that the concept is internal or essential to the stones as elements of the wall.¹⁰

In building the wall the mason is guided by the concept of a wall in general. This concept is distinct from her consciousness of a particular wall. For, for there to be consciousness of a particular wall there must first be the concept of a wall in general as what guides the construction of that particular wall as something the subject can become conscious of. Consciousness of a particular wall includes, in addition to the concept of a wall in general, consciousness of the specific stones that constitute the particular wall. Accordingly, here, the concept of the unity of the manifold is a condition for the possibility of the concept of a manifold and its synthesis, and this concept includes, in addition to the concept of the unity of the manifold, consciousness of a specific manifold.

As we saw, Kant writes regarding the concept of the unity of the manifold that '[t]he representation of this unity cannot [...] arise from the combination' but only becomes possible through the representation of the unity 'being added to the representation of the manifold'. Consequently, for Kant, to combine representations in the concept of a manifold and its synthesis,

¹⁰ It is important to note that the example only goes so far, since the unity of the wall differs from the unity of synthesis in that the wall is a product that *results* from the mason combining the stones according to a concept of a wall, while, as we saw, synthesis itself *includes* the consciousness of a synthetic unity of representations. In this regard synthesis is analogous to an organism, rather than an artefact. The organs that constitute the unity of an organism are only actual with reference to the organism that they constitute. Similarly, the representations that constitute a synthetic unity are only actual with reference to the synthetic unity that they constitute. It is in this sense that synthetic unity is an *original unity* (cf. Ch. III.8). A disanalogy between organism and synthesis is that the actuality of the unity of an organism, as opposed to the actuality of a synthetic unity, does not consist in someone's consciousness of that unity.

e.g. in a consciousness of specific stones unified in a particular wall, is only possible on the condition that there already is a concept of the unity of the manifold, e.g. the concept of a wall in general, which guides the combination of the manifold representations. According to Kant, then, consciousness of a synthetic unity of two representations, say of A and of B, is only possible on the basis of a concept of their synthetic unity, say Z, which guides the combination of the representations in one consciousness (cf. *KrV*: B130/1).

Accordingly, in §15 ‘On the possibility of combination in general’, Kant distinguishes the concept of the unity of the manifold “which precedes all concepts of combination *a priori*” from the category of unity (*KrV*: B131). And, he identifies the former concept as the condition for the possibility of any use of the understanding, calling it the “original-synthetic unity of apperception” (*KrV*: B131, B135; cf. B137, B345). Furthermore, he explicitly identifies this *condition for the possibility of synthesis* as the understanding in general, qua *capacity to synthesize*, noting that “this capacity [i.e. the synthetic unity of apperception] is the understanding itself.” (*KrV*: B134 n.) Lastly, he qualifies transcendental apperception both as *original* and as a *capacity*, when he identifies it as “the radical capacity (*Radikalvermögen*) of all our knowledge” (*KrV*: A114, my translation; cf. A66/B91).

With this understanding of ‘the concept of the unity of the manifold’ as the capacity to synthesize in hand, let us look more closely at the act of synthesis. We saw above that this act *combines manifold representations in consciousness of a manifold*. In what follows, I consider each of these two aspects of synthesis – *combining manifold representations* and *consciousness of a manifold* of representations – in turn.¹¹

¹¹ To aid the exposition I split my account of synthesis into two steps. The two-step nature of the account should not be mistaken for the nature of synthesis, which does not consist of two steps, but is a single cognitive act.

Combining manifold representations: The combination of representations is their *being held together* in a unity of consciousness. Synthesis is the act of *holding together* manifold representations in such a unity. Hence, the unity of representations in one consciousness is not distinct from the act of their combination, i.e. it is not *external to and independent of*, but *internal to and not independent of*, synthesis, as the act of holding together.

As we just saw, the combination of manifold representations in a synthetic unity of consciousness requires that we combine them according to the concept of the unity of the manifold, which we identified with the understanding in general, as the capacity to synthesize. Hence, the act of holding together manifold representations in a unity of consciousness is an exercise of the capacity to synthesize. Accordingly, a specific act of combining representations, for example, of A and of B, in one consciousness, will require a specific concept of the unity of A and B, say Z, which expresses the specific manner in which the capacity to synthesize is exercised in holding those representations together in one consciousness.

Consciousness of a manifold: To combine representations means not only to hold them together in a unity of consciousness, but furthermore to be *conscious* of this unity, i.e. to have an (at least implicit) consciousness of the representations being thus combined. The unity in which representations are held together by the subject is a unity of consciousness; as such it is itself consciousness, namely consciousness of that unity, i.e. of representations *as* combined.¹² Hence, the unity of consciousness is characterized by including (at least implicit) consciousness of that unity. Synthesis is self-conscious, i.e. the act of combining representations includes (at least

¹² Kant writes: “Strictly speaking consciousness is a representation that another representation is in me.” (*JL*: 33) “Judgement [i.e. synthesis] is [...] the representation of a representation [of an object].” (*KrV*: A68/B93)

implicit) consciousness of the unity of those representations (cf. Ch. I.3).¹³ If the subject holds together representations in a unity of consciousness, then she is therein (at least implicitly) conscious of those representations as combined.

As we saw, Kant expresses this thought by writing: “Combination is the representation of the *synthetic* unity of the manifold” (*KrV*: B130-1, my underscoring) For Kant, synthesis is an act that determines the unity of its content; more precisely it is an act of determining or enforming determinable matter as content. Accordingly, Kant writes that “synthesis alone is that which properly collects the elements for knowings (*Erkenntnisse*) and unifies them into a certain content” (*KrV*: A77-8/B103, my translation); and that “synthesis, considered for itself alone, is nothing other than the unity of the act of which it is conscious as such” (*KrV*: B153, my translation).

We can therefore characterize synthesis hylomorphically: The matter of an act of synthesis, qua determinable aspect, consists in manifold representations, while its form, qua determining aspect, is the manner in which those representations are held together in a consciousness of a manifold of representations (cf. *JL*: 33, §§2, 18, 59). Both the matter and the form of an act of synthesis are only intelligible in abstraction from that synthesis, qua hylomorphic unity (cf. Ch. III.8).

It is because synthesis determines the unity of its content that it is a spontaneous or self-determining act and that the understanding is a spontaneous or self-determining capacity.¹⁴ Seeing this, we can understand why Kant claims that synthesis cannot be an act of sensibility, but must be an act of the understanding (cf. *KrV*: B129, B130, B132, B134-5; Ch. III.7.1). Synthesis includes an (at least implicit) consciousness of unity that is internal to and not independent of the unity of

¹³ This fits with Kant’s identification of the understanding in general, qua capacity to synthesize, with “*pure*”, “*original*”, or “*transcendental apperception*” and his explanation that such apperception is “self-consciousness” (*KrV*: B132, A107; cf. B68, A114, A117 n.)

¹⁴ ‘Spontaneous’ does not mean ‘intentional’, that is it means self-determining only with regard to form not content. Kant notes that “we are not here talking about [...] causality by means of the will” (*KrV*: A92/B125).

which it is a consciousness. A sensory representation depends on what it represents, thus its object is external to and independent of being represented. However, a synthesis is a unity of representations that is internal to and not independent of being represented. This unity of representations includes the (at least implicit) consciousness of this unity. Therefore, synthesis cannot be the act of a receptive capacity such as sensibility, but must be the act of the understanding, which in this sense is a spontaneous capacity (cf. Rödl 2013a: 364/5).

4. Synthesis and the puzzle of inference

Having given a general account of synthesis, I here show that inference is a species of synthesis, and, in light of this, develop a detailed synthetic account of inference that can dissolve a prominent puzzle regarding the nature of inference. I proceed in three steps: First, I show that Kant conceives of inferring as a species of synthesis (§4.1). Second, I review two prominent competing contemporary conceptions of inference, identify them as compositional, and reconstruct a puzzle that results from their opposition (§4.2). Third, I develop a Kantian conception of inference as an instance of synthesis and show how this hylomorphic conception of inference can dissolve the puzzle of inference (§4.3).

4.1. The logical species of synthesis

Having explained that all functions or uses of the understanding can be traced back to judgement, qua synthesis, Kant goes on to suggest that different uses of the understanding are related to the different functions of unity in judgement, which are expressed by the forms of judgement listed in the table of judgements (cf. *KrV*: A70/B95). He writes: “The functions of the understanding can therefore all be found together if one can exhaustively exhibit the functions of unity in judgements.” (*KrV*: A69/B94, my translation)

Kant considers the understanding in general logically at the beginning of the *Analytic of Principles*. There, he notes three distinct logical functions or uses of the understanding in general: *conceiving* (*Verstehen*), *judging* (in the strict sense), and *inferring* (cf. *JL*: Universal Doctrine of Elements).¹⁵ He identifies conceiving with the understanding's logical use as capacity to conceive, which he calls the *understanding* (in the strict sense); he identifies judging (in the strict sense) with the understanding's logical use as a capacity to judge (in the strict sense), which he calls the *power of judgement* (*Urteilkraft*); and, he identifies inferring with the understanding's logical use as a capacity to infer, which he calls *reason*.¹⁶ Kant writes:

Pure general logic is constructed on a plan that corresponds precisely with the division of the higher capacities to know. These are: **understanding, the power of judgement, and reason**. In its analytic that doctrine [i.e. pure general logic] accordingly deals with *concepts, judgements, and inferences*, corresponding exactly to the functions and the order of those powers of mind which are comprehended under the broad designation of understanding in general. (*KrV*: B169, my translation & underscoring)

In a footnote to §9 'On the logical function of the understanding in judgements' Kant provides a clue as to how each of these three logical functions of the understanding is related to a specific form of judgement, and thus how they 'can be traced back to the understanding' in general as a capacity to synthesize. Commenting on the forms of judgement under the heading of modality, he links each modality of judgement to one of the 'higher capacities to know', noting that:

It is just as if in the first case [i.e. problematic judgement] thought were a function of the *understanding* [i.e. conceiving], in the second [i.e. assertoric judgement] of the *power of judgment* [i.e. judging], and in the third [i.e. apodeictic judgement] of *reason* [i.e. inferring]. (*KrV*: A75/B100 n.)

Kant thus seems to suggest that conceiving, judging, and inferring, as logical species of synthesis, are related to the forms of judgement under the heading of modality.

¹⁵ These are only the logical species of synthesis, i.e. the species of synthesis considered independently of any relation to objects or matter (intellectual synthesis). Transcendental consideration of synthesis would consider synthesis in its essential relation to operations of sensibility, thus focusing on species of synthesis including the sensible synthesis of sensations in an intuition (imaginative synthesis) that we considered in the previous chapter. I am focusing on intellectual synthesis in order to understand the formal aspect of knowledge in general (cf. §2).

¹⁶ For ease of exposition I abstract from what Kant calls 'inference of the understanding (*Verstandeschluß*)' and focus exclusively on what he calls 'inference of reason (*Vernunftschluß*)', for which I reserve the term 'inference' (cf. *KrV*: A303/B360; *JL*: §§42 & 43).

He explains the modality of judgement and its three manifestations as follows:

The *modality* of judgements is a very special function of them, which is distinctive in that it contributes nothing to the content of the judgement, [...] but rather concerns only the value of the copula in relation to thinking in general. *Problematic* judgements are those in which one regards the assertion or denial as merely possible (arbitrary). *Assertoric* judgements are those in which it is considered actual (true). *Apodictic* judgements are those in which it is seen as necessary.” (KrV: A74/B100, my translation & underscoring)

[T]hrough [modality] the relation of the whole judgement to the capacity to know is determined, judgements are either *problematic* or *assertoric* or *apodeictic*. The problematic ones are accompanied with the consciousness of the mere possibility of the judging, the assertoric ones with the consciousness of its actuality, the apodeictic ones, finally, with the consciousness of its necessity. (JL: §30, my translation & underscoring)

Kant highlights that modality differs from the other forms of judgement in that it ‘contributes nothing to the content of judgement’. This is so because the modality of judgement determines only ‘the relation of the whole judgement to the capacity to know’, i.e. modality only determines the manner in which the content presented in an act of the capacity to judge is related to the capacity to judge, and thus how that judging is ‘regarded’, ‘considered’, ‘seen as’, or what ‘consciousness it is accompanied with’ with respect to modality. Kant expresses this by saying that modality ‘concerns only the value of the copula in relation to thinking in general’.

Kant distinguishes three manners in which a judgement can be related to the capacity to judge: problematically, assertorically, and apodeictically. *Problematic judgement* holds representations together in a manner that presents its content as judgeable, i.e. it is a judging that includes (at least implicit) consciousness of its *possibly being* judged. *Assertoric judgement* holds representations together in a manner that presents its content as judged, i.e. it is a judging that includes (at least implicit) consciousness of its *actually being* judged. *Apodeictic judgement* holds representations together in a manner that presents its content as having to be judged, i.e. it is a judging that includes (at least implicit) consciousness of its *necessarily being* judged. While Kant takes these modalities to be expressible in propositions of the form ‘S *may be* P’, ‘S *is* P’, and ‘S *must be* P’ respectively, the various values of the copula here only determine the act’s relation to the capacity to judge, rather than a modality of the contents of those acts, i.e. they indicate the modality of the (at least

implicit) consciousness of the judgement's relation to the capacity to judge that the respective acts include (cf. *JL*: §30).¹⁷

Given this characterization of the modalities of judgement, it is not too difficult to see how the different logical uses of the understanding in general or logical species of synthesis are related to them:

Conceiving consists in holding marks together in a manner that presents their unity as possible in a concept, so that conceiving includes (at least implicit) consciousness of its content *possibly being* judged. Put differently, the unity of the marks in a *concept* presents its content as judgeable, so that concepts *may be* judged. As such, concepts exhibit the function of unity of problematic judgement, so that the understanding (in the strict sense) is the capacity to synthesize problematically. Kant writes: "Concepts [are] [...] predicates of possible judgements." (*KrV*: A69/B94)

Judging (in the strict sense) consists in holding concepts or judgements together in a manner that presents their unity as actual in a judgement, so that judging includes (at least implicit) consciousness of its content *actually being* judged. Put differently, the unity of the concepts or judgements in a *judgement* presents its content as judged, so that judgements *are* judged. As such, judgements exhibit the function of unity of assertoric judgement, so that the power of judgement is the capacity to synthesize assertorically.

¹⁷ There are two corollaries to note here: First, since the modality of judgement does not affect the content of judgement, *judgements that differ merely with respect to their modality have the same content*, i.e. 'S may be P', 'S is P', and 'S must be P' all share the same content, while differing only with regard to their modality, i.e. in the manner in which that content is related to the capacity to judge. Second, since judgements can not only present their content as actually judged, but also as possibly or necessarily judged, while Kant explains problematic and apodeictic judgement in terms of assertoric judgement, *he does not conceive of judgement as such as assertoric*. Kant's conception of judgement thus differs from the standard conception of judgement in post-Fregean analytic philosophy which by conceiving of judgement as the act of attaching assertoric force to a judgeable content or proposition, conceives of judgement as such as assertoric.

Inferring consists in holding concepts, the major term and the minor term, together in a manner that presents their unity as necessary in a conclusion, so that inferring includes (at least implicit) consciousness of its content *necessarily being* judged.¹⁸ Put differently, the unity of the concepts in an inference presents its content as having to be judged, so that conclusions *must be* judged. As such, the conclusion exhibits the function of unity of apodeictic judgements, so that reason is the capacity to synthesize apodeictically.¹⁹ Kant writes: “[T]he conclusion is always accompanied with the consciousness of necessity and consequently has the dignity of an apodeictic proposition.” (*JL*: §60; cf. §56)

The modalities of judgement are related to the logical uses of the understanding as logical species of synthesis, because, just as “pure general logic abstracts from all content of knowing”, so modality does not contribute anything to the content of judgement, i.e. it is a logical function of judgement that falls within the purview of pure general logic (*JL*: §5, my translation).²⁰

In the following sub-sections, I provide a detailed account of inference as an instance of intellectual synthesis and show how it can dissolve a prominent puzzle about the nature of inference. I thus both further substantiate the general account of synthesis as the formal aspect of knowledge in general and demonstrate the philosophical fruitfulness of the hylomorphic account of knowledge that it is an essential aspect of.

¹⁸ Kant argues that all deductive inferences can ultimately be reduced to categorical inferences or syllogisms in predicate logic (cf. *FS*; *KrV*: B141 n.). Consequently, inferring is paradigmatically a holding together of concepts or terms, rather than propositions. More on this in §4.3.

¹⁹ In an ordinary inference this only means that judging the conclusion is necessary relative to the assumption of the truth of the premises. It is only in the inferences of the mathematician, logician, and metaphysician that judging the conclusion is necessary absolutely. Although, Kant, of course, argues in the Transcendental Dialectic that the seeming necessity of metaphysical inferences is a mere transcendental illusion (cf. ns.39 & 44).

²⁰ The other three genera of forms of judgement, quantity, quality, and relation, each contribute to the content of judgement by specifying the form of the concepts held together in a judgement, so that they fall within the purview of transcendental logic.

I have two reasons for focusing on inference, as opposed to judgement, to further spell out Kant's account of synthesis. First, the focus on inference as a logical instance of synthesis enables me to develop an underappreciated hylomorphic conception of inference that is able to dissolve a prominent puzzle in recent debates about the nature of inference (cf. §4.2). This enables me to further illustrate the philosophical fruitfulness of Kant's hylomorphic account of knowledge, of which this synthetic conception of inference is an aspect (cf. §4.3).

Second, so far, we have only considered how acts of the understanding are essential to empirical knowings manifesting themselves in individual and unconnected empirical judgements. However, an aggregate of such judgements does not yet amount to knowledge as "a whole of compared and connected representations", i.e. as a system of true judgements or a science (*KrV*: A97; cf. Ch. I.2). As we will see, it is the forms of inference that unify manifold empirical knowings as a science. Consequently, in investigating the synthetic nature of inference, we deepen our understanding of the understanding as our capacity to know (cf. §5).

4.2. The puzzle of inference

Here, I reconstruct two prominent competing contemporary accounts of inference and sketch the puzzle of inference that results from their opposition.

The following is an example of the sort of cognitive process that I take to be at issue under the heading of inference:²¹

I know that: (P1) If it is raining, then the streets are wet.
I combine this with my observation that: (P2) It is raining.
I conclude that: (C) The streets must be wet.

²¹ I adapt this example from Boghossian (2014: 2).

What we have here is a cognitive process in which I judge (C) on the basis of judging (P1) and (P2), because I take (C) to follow from (P1) and (P2). Accordingly, we can define *inference* as follows:

[INFERENCE] Inference is judgement of some proposition, the conclusion, in virtue of consciousness that that proposition follows from one or more other judged propositions, the premises.²²

I focus on *deductive inference*, i.e. on cases in which a conclusion ‘follows’ from one or more premises.²³ However, I take my considerations about inference not to be specific to deductive inference, but to be generalizable to any form of inference, i.e. to any case in which judging a conclusion is *somehow grounded* on accepting one or more premises.²⁴

Analyzing the definition, we can distinguish three constitutive elements of inference: (1) *judging the premises*; (2) *consciousness that the conclusion follows from the premises*; and, (3) *judging the conclusion*.

We find all of these elements reflected in Kant’s definition of inference:

In every inference there is [1] a proposition that serves as the ground, and [3] another, namely the conclusion that is drawn from the former, and finally [2] the following of the inference [*Schlußfolge*] (consequence) according to which the truth of the conclusion is connected inevitably [i.e. necessarily or apodeictically] with the truth of the first proposition. (*KrV*: A303/B360, my translation; cf. *JL* §41, §56)

²² Note that on this definition inference is understood as *the drawing of a conclusion from some premises*, rather than (a) an *abstract object*, like an ordered pair of a premise set and a conclusion (i.e. an argument), or (b) a *transition in a rule-governed formal system*, from one well-formed formula to another, where the agent making this transition need not assign any interpretation to any of the formulae involved, or (c) a *computational cognitive process*, like the process by which the visual system computes the edges of visible objects (cf. Neta 2013: 388).

²³ I focus on deductive inference for consistency with both Kant and the literature on inference. A more general definition of inference would look like this: [INFERENCE*] Inference is judgement of some proposition, the conclusion, in virtue of consciousness that judgement of that proposition is grounded in one or more other judged propositions, the premises. In what follows the term ‘inference’ should be understood to mean ‘deductive inference’ unless otherwise noted.

²⁴ There is, of course, also a distinction between theoretical and practical inference. The former is a response to the question ‘What should I judge?’, while the latter is a response to the question ‘What shall I do?’. I exclusively focus on theoretical inference.

While there is general agreement on the definition of the cognitive process at issue under the heading of inference,²⁵ there is an ongoing debate about how exactly to conceive of it.²⁶

Two competing conceptions of inference shape this debate. The first of these, which I call the *mere causal conception of inference*, conceives of inference as follows:

[MERE CAUSAL CONCEPTION OF INFERENCE] A subject infers if and only if the subject's judging the premises causes her to judge the conclusion.

Specific versions of this conception further specify the ground of the causal relation between judging the premises and judging the conclusion. Specifically, they commonly explain it as due to a subject's possession of a reliable disposition, e.g. to judge the consequent of a hypothetical judgement if she judges the hypothetical judgement and the antecedent, thereby instantiating a valid rule of inference, in this case *modus ponens*.²⁷

The mere causal conception of inference is a compositional conception of inference: It conceives inference as a unity of two elements: (a) judging the premises, and (b) judging the conclusion, where judging the premises is intelligible independently of judging the conclusion, so that judging the conclusion is external to and independent of judging the premises.

The mere causal conception of inference is unable to sufficiently distinguish between mere association and inference, thus failing as an adequate explanation of inference. This can be brought

²⁵ We find definitions of inference to the same effect as Kant's both preceding and succeeding it: Locke writes: "*Inference* [...] consists in nothing but [2] the Perception of the connexion there is between [1] the *Ideas* [...] whereby the Mind comes to see, either [3] the certain Agreement or Disagreement of any two *Ideas*." (*Essay*: IV.17 §2) Peirce writes: "[I]n reasoning [i.e. inferring] we should be conscious, not only of [3] the conclusion, and of our deliberate approval of it, but also of [2] its being the result of [1] the premiss from which it does result." (Peirce 1905: 483) Frege writes: "To make a [3] judgment because [2] we are cognizant of [1] other truths as providing a justification for it is known as *inferring*." (Frege 1979: 3) Boghossian writes: "S's inferring from p to q is for S [3] to judge q *because* S [2] *takes* the (presumed) truth of [1] p to provide support for q." (Boghossian 2014: 4)

²⁶ For recent contributions to this debate, see e.g. Wedgwood (2012), Neta (2013), Chudnoff (2013), Dogramaci (2013), Boghossian (2014), Broome (2013 & 2014), Wright (2014), Hlobil (2014 & 2019), Valaris (2014), Held (2020), Marcus (2021).

²⁷ For versions of this conception of inference, see e.g. *Treatise*; Armstrong (1968), Winters (1983), Strawson (2003), and Wright (2014).

out by showing that the mere causal conception leaves the judgement of the supposed conclusion *rationaly ungrounded*. That is, it cannot account for the consciousness that the conclusion follows from the premises being the very cause of the subject's judging the conclusion. According to the mere causal conception a subject's judging the premises causes her to judge the conclusion. Let's assume that the conclusion actually follows from the premises. We might ask the subject: Why do you judge the conclusion? To answer this question, the subject would have to be able to provide grounds that establish the truth of the conclusion. Such grounds would cite the logical fact that the conclusion follows from the premises. However, on the mere causal conception the subject need not have any consciousness of this logical fact, so that her judging the conclusion may be rationally ungrounded and thus not really a conclusion at all. This is so because, for the relevant judgement to be a conclusion it must be judged *from consciousness of the fact* that it follows from the premises, rather than merely *in accord with the fact* that it follows from the premises. Thus, the mere causal conception is not an adequate conception of inference because it is unable to sufficiently distinguish between mere association and inference.²⁸

The rational ungroundedness of what the mere causal conception conceives as drawing the conclusion brings out that for a judgement that is caused by judgement of some premises to constitute judging the conclusion of an inference this causal relation must be explained by consciousness that the supposed conclusion follows from the premises.

Given this insight, Paul Boghossian has suggested a further condition that a cognitive process has to meet to be an inference:

[TAKING CONDITION] "Inferring necessarily involves the thinker *taking* his premises to support his conclusion and drawing his conclusion *because* of that fact." (Boghossian 2014: 5)

²⁸ For versions of this objection, see e.g. Boghossian (2014: 16) and Held (2020: 43/4).

Adding the taking condition to the mere causal conception of inference yields the second prominent conception of inference, which I call the *reflective causal conception of inference*:

[REFLECTIVE CAUSAL CONCEPTION OF INFERENCE] A subject infers if and only if the subject's judging the premises causes her to judge the conclusion, and this is explained by the subject's consciousness that the conclusion follows from the premises.

The question that emerges in specifying the reflective causal conception is how to conceive of the consciousness that the conclusion follows from the premises, i.e. the 'taking', so that we can understand it as explaining the subject's judging the premises causing her to judge the conclusion. In the literature on inference the 'taking' is variously conceived as a *belief*, an *intuition* (understood as an intellectual seeming), or some sort of *sui generis attitude*.²⁹

What matters is that on all of these conceptions the subject's 'taking' amounts to a further cognitive act over and above her independently intelligible judgement of the premises and her judgement of the conclusion. Hence, the reflective causal conception remains compositional: It conceives of inference as a *compositional unity* of three elements: (a) judging the premises, (b) judging the conclusion, and (c) consciousness that the conclusion follows from the premises, where judging the premises and consciousness of the conclusion following from the premises are intelligible independently of each other and of judging the conclusion, so that judging the conclusion remains external to and independent of the other two elements.

The compositional nature of the reflective causal conception of inference makes it unable to adequately remedy the shortcomings of the mere causal conception of inference. This can be brought out by showing that the reflective causal conception of inference is subject to a *regress*. That is, rather than explaining why judging the premises causes judging the conclusion,

²⁹ For the view that the 'taking' is a belief, see e.g. Neta (2013) and Valaris (2014), for the view that it is an intuition, e.g. Chudnoff (2013) and Dogramaci (2013), and for the view that it is a *sui generis* attitude, e.g. Wedgwood (2012) and Hlobil (2019).

consciousness that the conclusion follows from the premises demands a further explanation of how it and judging the premises can jointly cause judging the conclusion, and so on. For instance, if a subject judges (P1) and (P2), while simultaneously in a further cognitive act enjoying consciousness with the content '(C) follows from (P1) and (P2)', this is not sufficient to explain why she must judge (C). And, as Lewis Carroll's fable of Achilles and the tortoise illustrates, adding a further cognitive act with the content '(P1) and (P2), and (C) follows from (P1) and (P2), so (C)' does not improve the situation but starts us out on a regress. Consequently, the reflective causal conception's compositional nature makes it unable to adequately explain inference.³⁰

The shortcomings of the mere causal and the reflective causal conception of inference seem to confront any explanation of inference with the following *dilemma of inference*:³¹

[COGNITION HORN] If inference is conceived merely causally, then it is open to *rational ungroundedness*. To avoid this our conception of inference *must include cognition* on the part of the subject, i.e. we must satisfy the taking condition.

[IMMEDIACY HORN] If inference is conceived as including the taking condition, then it is open to a *regress*. To avoid this our conception of inference must not include any cognition on the part of the subject, but *must be immediate*, i.e. we cannot satisfy the taking condition.

The upshot of this dilemma is that there are two seemingly contradictory requirements on an account of inference: (i) a *cognition requirement*, motivating the reflective causal conception of inference; and, (ii) an *immediacy requirement* that undermines this condition and animates the mere causal conception.³² It seems that without satisfying both these requirements, we cannot explain inference, because if inferring is not cognitive, it succumbs to rational ungroundedness,

³⁰ For versions of this objection, see e.g. Carroll (1895), Stroud (1979), Boghossian (2014: 7/8), Rödl (2018: Ch. 9.6), and Held (2020: 71-3).

³¹ I borrow the label 'dilemma of inference' from Held (2020: 78). Kitcher articulates a version of this dilemma as what she calls 'A Second Hard Problem of Consciousness' (cf. Kitcher 2011: Ch. 15.4). Lavin articulates it, in the context of reasons for action, as a dilemma between 'automatism' and 'contemplativism' (cf. Lavin 2011: §IV).

³² For an argument that the immediacy requirement speaks in favor of the mere causal as opposed to the reflective causal conception of inference, see e.g. Van Cleve (1984: 560).

and if it is not immediate, it faces a regress. The insight into this seeming dilemma leads to what I call *the puzzle of inference*:

[PUZZLE OF INFERENCE] In the face of the dilemma of inference, how is it so much as intelligible that we are able to make judgements of conclusions that seem to immediately follow from the premises?³³

Some authors have suggested that the seeming inexplicability of inference, expressed by this puzzle, is a mark of the fact that inference is cognitively fundamental (cf. Boghossian 2014: 17). By contrast, the next sub-section will show that by following Kant in explaining inference as an instance of synthesis and thus conceiving of it hylomorphically, as opposed to compositionally, we can dissolve the puzzle of inference and provide a positive articulation of the nature of inference.

4.3. *Inference as synthesis*

Here, I apply Kant's account of synthesis in general to the case of inference to give a hylomorphic account of inference that simultaneously fulfills the cognition and immediacy requirement, thereby dissolving the puzzle of inference. I do this by first applying each of the two aspects of synthesis – *combining manifold representations*, and *consciousness of a manifold* of representations – to the case of inference, and then elaborating the synthetic conception of inference that results from this.³⁴

Combining manifold representations: In considering Kant's general account of synthesis, we saw that to combine manifold representations in a synthetic unity of consciousness requires that we combine them according to the concept of the unity of the manifold, which we identified with the capacity to synthesize (cf. §3). Hence, the act of holding together manifold representations in a unity of consciousness is an exercise of the capacity to synthesize. Applying this general point

³³ The form of this puzzle is similar to Kant's Puzzle: [KANT'S PUZZLE] In the face of Kant's Insight, how is it so much as intelligible that we are able to make judgements that purport to be about mind-independent objects (cf. Ch. II.5)? Like Kant's Puzzle, the puzzle of inference questions *how* something obviously actual, namely inference, can be understood to be *possible*. That is, it expresses an *aporia* that demands *dissolution* by means of a *clarification* of the intelligibility of (the possibility of) inference (cf. Ch. II n.38).

³⁴ Here it is again important to remember that inference does not consist of two steps, but that it is merely the account of inference that is explicated in two steps. Inference is a single cognitive act.

to inference would mean that to combine manifold concepts in an inferential unity of consciousness requires that we combine them according to the concept of inference, which we can identify with reason as the capacity to synthesize apodeictically. Hence, the act of holding together concepts in an inferential unity of consciousness is an exercise of reason.

As we saw, a specific combination of representations, say of A and of B, in one consciousness is an act of the capacity to synthesize whose specific manner of combining representations in that exercise can be expressed in a specific concept of the unity of a manifold, say Z (cf. §3). Applying this general point to inference would mean that a specific combination of concepts, say of those constituting (P1) and (P2), in one consciousness is an act of the capacity to synthesize apodeictically whose specific manner of combining representations in that exercise can be expressed in a specific concept of inference, say the modus ponens rule.

Consciousness of a manifold: As we saw, synthesis is self-conscious. That is, combining representations in one consciousness includes (at least implicit) consciousness of those representations being thus combined (cf. §3). Applying this general point to inference would mean that to combine concepts, say those constituting (P1) and (P2), in one consciousness includes (at least implicit) apodeictic consciousness of their having to be thus combined, say (C) having to be judged. To see how this is so, we need to consider Kant's account of inference in some detail.³⁵

Kant states that: "An inference of reason is the knowing (*Erkenntnis*) of the necessity of a proposition through the subsumption of its condition under a given general rule." (*JL*: §56; cf. *KrV*: A307/B364, A330/B386) Since, for Kant the paradigmatic kind of inference is a categorical inference, let us consider the following example to see what he means (cf. n.18):

Major premise:	All humans are mortal.
Minor premise:	Socrates is human.
Conclusion:	Socrates is mortal.

³⁵ My synthetic account of categorical inference in predicate logic is indebted to Held (2020: Ch. 4.1).

Here, <mortal> is the major term, <Socrates> is the minor term, and <human> is the middle term, which, since it appears in both premises, enables their combination (cf. *JL*: §62). The major premise is the ‘general rule’ Kant speaks about above. The subject of the major premise, ‘human’, is the condition of the rule, i.e. in judging that all humans are mortal, I represent the concept ‘human’ as a condition for deciding that something is mortal (cf. *JL*: §58). In the minor premise <Socrates> is subsumed under the condition of the rule, <human>. Kant writes: “The combination of that which is subsumed under the condition with the assertion of the rule is the *inference*.” (*JL*: §58) Hence, to infer that Socrates is mortal is to subsume the subject <Socrates> under the predicate <human> in the minor premise, while in the same consciousness representing <human> as the condition for deciding that something is mortal in the major premise.

For Kant the combination of the premises as the subsumption of the condition under the rule includes the drawing of the conclusion (cf. *JL*: §56). He writes: “The inference of reason is itself nothing other than a judgement [of the conclusion], by means of the subsumption of its condition under a general rule (major).” (*KrV*: A307/B364; cf. A304/B361-2; *FS*: 2: 59)³⁶ Hence, if I represent Socrates, in the consciousness that all humans are mortal, as human, then I therein represent Socrates as being mortal. By subsuming the condition under the rule, I combine the two premises in one consciousness: I hold the concepts ‘Socrates’ and ‘mortal’ together in one consciousness, by being conscious of the middle term ‘human’ as both something of which the predicate concept ‘mortal’ is universally predicated (in the major premise) and something under which the subject concept ‘Socrates’ falls (in the minor premise) (cf. *KrV*: A304/B361-2). The act of subsuming therefore (at least implicitly) includes judging the conclusion that Socrates is mortal.

³⁶ While Kant’s ‘by means of’ is compatible with the thought that the drawing of the conclusion is an extra step beyond the subsuming, rather than being included in the subsuming, my systematic articulation of the synthetic conception of inference will show that we should credit Kant with the reading I suggest in the main text.

As we saw, Kant regards inference as exhibiting the form of an apodeictic judgement (cf. *JL*: §60; §4.1). The reason for this is the following: Apodeictic judgement holds representations together in a manner that presents its content as having to be judged, i.e. it is a judging that includes (at least implicit) consciousness of its *necessarily being* judged, so that it is judged. Inference combines the premises in one consciousness that includes (at least implicit) consciousness that the conclusion *follows* from the premises, i.e. that the conclusion *has to be* judged and thus is judged. Consequently, we could express the conclusion of our inference also as ‘Socrates *must be* mortal’, if we remember that the apodeictic validity of the copula here does not indicate a necessity of the content of the conclusion, but merely the manner of its relation to the capacity to judge, i.e. its form as the conclusion of a deductive inference (cf. n.19).

To see how this synthetic account of inference can dissolve the puzzle of inference, let us extend it to the example of a modus ponens inference in propositional logic that serves as the test case in contemporary debates about inference.³⁷ The first premise of such an inference is a hypothetical judgement of the form ‘if p, then q’. According to Kant, hypothetical judgements consist in a combination of two problematic judgements (cf. *KrV*: A75/B100). To make a hypothetical judgement is to conceive of one judgement as conditioned by another. In the judgement ‘if p, then q’ I conceive of my possible judgement ‘p’ as sufficient condition for the possible judgement ‘q’. The hypothetical judgement of the first premise thus is the general rule. The second premise of an inference in modus ponens is an assertoric judgement of the form ‘p’. This judgement asserts the condition of the rule, i.e. the antecedent. That is, as Kant puts it, it transforms the modality of the antecedent from problematic to assertoric (cf. *JL*: §75, *KrV*: A75-6/B101). If this condition is met,

³⁷ Kant notes that inferences in modus ponens, which he calls hypothetical inferences, are strictly speaking not inferences of reason because they lack a middle term (cf. *JL*: §§26, 75). Nevertheless, we can show that hypothetical inferences can still be conceived of as synthetic acts of combing the premises in one consciousness.

this justifies me in separating the consequent from the conditional, i.e. in concluding ‘q’. That is, in transforming the modality of the consequent from problematic to apodeictic. Consequently, my judging the premises ‘if p, then q’ and ‘p’ in one consciousness, i.e. subsuming the condition under the rule, includes (at least implicit) consciousness of the necessity of judging the conclusion, i.e. consciousness that the conclusion *must be* judged, and thus judging the conclusion, ‘q’.

But, how are we to understand this? Why does the combination of the premise ‘if p, then q’ with the further premise ‘p’ in one consciousness include judging the conclusion ‘q’?³⁸

In general, to judge ‘p’ is to take a stance on whether p is true. While it is possible for me to refrain from taking such a stance, as in a problematic judgement, I cannot take an affirmative and a negative stance on whether p is true simultaneously. This fact is expressed by the principle of non-contradiction (cf. *Meta.* IV.3 1005b23-4; *KrV*: A151-2/B190-2). ‘Simultaneously’ here means ‘in one consciousness’. That is, I cannot hold the judgements ‘p’ and ‘not-p’ together in one consciousness.

It follows that to judge ‘p’ is to be conscious of ‘p’ as a judgement that cannot be held together in one consciousness with the judgement ‘not-p’, i.e. as including (at least implicit) consciousness of the falsity of ‘not-p’. Consequently, if I judge ‘p’, but then come to realize that ‘p’ is false, I therein *immediately* relinquish my judgement ‘p’, i.e. I judge ‘not-p’. In realizing the falsity of my judgement ‘p’ and thus relinquishing that judgement and judging its contrary, I do not perform various distinct cognitive acts, but the realization that my judgement ‘p’ is false includes the acts of relinquishing that judgement and judging ‘not-p’. Furthermore, it follows that the hypothetical judgement ‘if p, then q’ includes the (at least implicit) consciousness that the judgement ‘not-q’ cannot be combined in one consciousness with the judgements ‘if p, then q’ and ‘p’.

³⁸ My synthetic account of modus ponens inference in propositional logic is indebted to Kimhi (2018: Ch 1.3) and Held (2020: Ch. 4.2).

If I judge ‘p’, in the consciousness that ‘if p, then q’, i.e. if I combine the judgements ‘if p, then q’ and ‘p’ in one consciousness, then I cannot in that same consciousness judge ‘not-q’. For, if I judge ‘if p, then q’ and ‘p’, I would contradict myself if, in the same consciousness, I judged ‘not-q’. The following judgements cannot be combined in one consciousness: ‘if p, then q’, ‘p’, ‘not-q’. Since consciousness that it is *impossible* to judge ‘not-q’ includes (at least implicit) consciousness that it is *necessary* to judge ‘q’, it follows that combining the judgements ‘if p, then q’ and ‘p’ in one consciousness includes (at least implicitly) consciousness that ‘q’ must be judged, so that ‘q’ is judged. In the case of modus ponens, it is thus the impossibility of combining two contradictory judgements in one consciousness that explains why my judging the consequent is internal to and not independent of my realization that the antecedent is true.

If I combine my judgement ‘if p, then q’ with my judgement ‘p’ in one consciousness, then this consciousness is incompatible with the judgement ‘not-q’. I thus immediately realize that, given that the premises are true, it is *impossible* to judge ‘not-q’. And this includes realizing that it is *necessary* to judge ‘q’, so that ‘q’ is judged, as the conclusion. Hence, inference is judging the conclusion in virtue of consciousness that it follows from the premises.

We thus have articulated what I call the *synthetic conception of inference*:

[SYNTHETIC CONCEPTION OF INFERENCE] A subject infers if and only if she judges the conclusion in combining the premises in one consciousness that includes (at least implicit) consciousness that the conclusion follows from the premises.

On this conception judging the conclusion, rather than being *external to and independent of* judging the premises in the consciousness that the conclusion follows from the premises, is internal to and not independent of this. Accordingly, this conception conceives of inference as a *hylomorphic unity* with three aspects: (a) judging the premises (qua material aspect), (b) consciousness that the conclusion follows from the premises (qua formal aspect), and (c) judging the conclusion (qua manifestation of original unity). Here, judging the conclusion is not, as on the

compositional conception, external to and independent of the other elements, but is a manifestation of the original hylomorphic unity that is the inference of which they are abstractable aspects. In line with this, Kant writes:

The *matter* of inferences of reason consists in the antecedent propositions or premises, the *form* in the conclusion insofar as it contains the *consequentia* [i.e. the conclusion following from the premises]. (*JL* §59; cf. A303/B360)

To avoid misunderstanding, let me add some further remarks on the synthetic conception of inference: First, it might seem that on this conception the inferring subject's consciousness that the conclusion follows from the premises is what determines the validity of her inference. However, the subject's consciousness of the conclusion following from the premises is, of course, fallible, i.e. such consciousness is not always knowledge that the conclusion follows from the premises, but may be a mere illusion to this effect. After all, the subject's reason, qua capacity to infer, is fallible due to unfavorable conditions, such as, for instance, inattention, and, when the exercises of her capacity fail, her consciousness of the validity of those exercises is a mere illusion that the conclusion follows from the premises.³⁹ Hence, the validity of an inference depends on whether it accords with the rules of inference, rather than on whether the subject thinks it does, although if it does so accord the subject can be conscious of this.

Second, it might seem that, since judging the premises includes (at least implicitly) judging the conclusion, the synthetic account denies mediate inferences, i.e. cases in which a set of premises does not immediately entail the conclusion, but requires intermediate inferential steps to sub-

³⁹ Kant distinguishes three kinds of illusion: (1) *Empirical illusion*, which results from the false empirical use of the rules of the understanding due to an unnoticed influence of sensibility (cf. *KrV*: A295/B251-2). For example, the moon seeming larger earlier in the night (cf. *KrV*: A297/B354). This is an aspect of an unsuccessful exercise of our capacity to know empirical objects. (2) *Transcendental illusion*, which results from the uncritical transcendental use of the rules of reason due to mistaking subjective for objective necessity (cf. *KrV*: A295-7/B352-3). An example are the Antinomies of the first *Critique's* Transcendental Dialectic. This is the illusion of there being a capacity to be exercised, namely a capacity to know a priori objects, where there is not (cf. n.44). (3) *Logical illusion*, which results from the false logical use of the rules of reason due to inattention (cf. *KrV*: A296/B353). For example, committing the fallacy of affirming the consequent. This is an instance of the unsuccessful exercise of the capacity to think, which I am discussing in this chapter.

conclusions, which can then serve as further premises to reach the final conclusion. However, there is no reason to interpret the synthetic account in this way. Instead, it can acknowledge that the finitude of our reason – reflected in its noted fallibility – might require a subject to arrive at a conclusion by intermediate inferential steps.

Third, the claim that inference includes (at least implicit) consciousness of its validity might be thought to characterize it in a way that makes it hard to see how it could be an instance of a capacity that is possessed by anyone but those who have studied formal logic. However, this would only be so if the (at least implicit) consciousness of the validity of an inference was essentially (at least implicit) consciousness of the concept of inference, rather than of exercises of reason. If we conceive of it in the latter way, then an inferring subject's (at least implicit) consciousness of a concept of inference consists in her ability to express and understand sentences of a certain form, e.g. 'All ... are ...' or 'If..., then...'; to identify whether certain conclusions follow from specific premises; to give examples of certain premises supporting specific conclusions; or to identify and correct inferential fallacies committed by others. That is, this concept articulates the function of her reason and can, but need not, be articulated abstractly in consciousness of a concept of inference as apodeictic synthesis.

Thus, although the inferring subject's (at least implicit) consciousness of the validity of her inference is not essentially an (at least implicit) consciousness of a concept of inference, an inferring subject is in principle able to express her (at least implicit) consciousness in such a concept, i.e. to systematically articulate pure general logic. Kant suggests as much when he writes: "We cannot think, or use our understanding, in any other way than in accordance with specific

rules. These rules we can now think again for themselves, i.e. we can think them without their application or in abstracto.” (*JL*: 11)⁴⁰

Having reconstructed and clarified the synthetic conception of inference, let us see how it can satisfy both the cognition and the immediacy requirement and thus dissolve the *puzzle of inference*.

What makes drawing the conclusion ‘q’ *cognitive* is that it is internal to and not independent of judging ‘if p, then q’ and ‘p’ in one consciousness because this consciousness includes (at least implicit) consciousness that ‘q’ follows from judging ‘if p, then q’ and ‘p’. That is, judging the premises in one consciousness includes judging the conclusion in virtue of consciousness that it follows from the premises, thus avoiding *rational ungroundedness*.

What makes drawing the conclusion ‘q’ *immediate* is that it is internal to and not independent of the consciousness that ‘q’ follows from judging ‘if p, then q’ and ‘p’, which is internal to and not independent of judging ‘if p, then q’ and ‘p’ in one consciousness. That is, judging the conclusion in virtue of consciousness that it follows from the premises is internal to and not independent of judging the premises in the consciousness that the conclusion follows from the premises, thus avoiding a *regress*.

Consequently, if we follow Kant in understanding inference as an instance of synthesis, immediacy and cognition no longer conflict with each other, but instead are revealed to be complementary aspects of inference as a hylomorphic unity.

The upshot of the synthetic account’s dissolution of the puzzle of inference is that, unlike the mere causal and the reflective causal account which generated this puzzle, it is a viable explanation

⁴⁰ Kant identifies *necessity* and *universality* as the two characteristic marks of the *a priori* (cf. *KrV*: B3/4). An act of inference includes consciousness of its necessity, and consciousness of its form, i.e. of its universality, both of which are internal to and not independent of that act. While the consciousness of its necessity is included *explicitly* in the act of inference, consciousness of its universality is included only *implicitly* in that act, so that universality is only brought to articulation by logical reflection. More generally, this suggests that philosophy is the universal articulation of necessity, e.g. the articulation of the laws of the understanding and reason.

of inference. This illustrates the philosophical fruitfulness both of the notion of synthesis in particular and of a hylomorphic account of knowledge in general.

5. The unity of empirical knowledge

Having reconstructed Kant's hylomorphic account of synthesis as the formal aspect of knowledge in general and substantiated it through the synthetic conception of inference, I conclude by arguing that this account implies a conception of the understanding not just as a capacity to know mind-independent objects in individual and unconnected judgements based on intuition, i.e. as the understanding providing the *source* of our knowledge, but as a capacity to inferentially unify those judgements into a science, i.e. as reason providing the *end* of our knowledge.

As we saw, synthesis is the “representation of the synthetic unity of a manifold” (*KrV*: B130/1; cf. §3).⁴¹ With respect to the sensible manifold Kant relates synthesis to self-consciousness, writing: “For the manifold representations that are given in a certain intuition would not all together be *my* representations if they did not all together belong to a self-consciousness” (*KrV*: B132). For Kant, it is thus a condition on a manifold of representation being all together *my* representations that they belong to a self-consciousness. Kant notes that this condition is not fulfilled if I am conscious of each of my representations individually and unconnected with others, i.e. if each representation is merely accompanied by an “empirical consciousness”:

[T]he empirical consciousness that accompanies different representations is by itself dispersed and without relation to the identity of the subject. The latter relation therefore does not yet come about by my accompanying each representation with consciousness, but rather by my *adding* one representation to the other and being conscious of their synthesis. [...] [O]nly because I can comprehend their manifold in one consciousness do I call them all together my representations; for otherwise I would have as multicolored, diverse a self as I have representations of which I am conscious. (*KrV*: B134, my translation & underlining)

⁴¹ The subsequent argument is indebted to Held (2020: Ch. 7.1).

Kant here explains that the only way in which I can become conscious of individual and unconnected representations as *my* representations is by holding them together in one consciousness, i.e. through synthesis.⁴²

To have ‘as multicolored, diverse a self as I have representations’ is impossible, as it would constitute a dissolution of the subject. For Kant, it is thus a constitutive condition of representations that I can be consciousness of as mine that I can combine them in one self-consciousness. It is “only because I can combine a manifold of given representations *in one consciousness* that it is possible for me to represent the *identity of the consciousness in these representations* itself” (*KrV*: B134). If, however, it is a constitutive condition for representations that I can be consciousness of as mine that those representations can be combined in one self-consciousness, then every representation that is anything to me has to be of a kind that can be combined with other representations in this manner.

We saw that, on this basis, Kant is able in the Transcendental Deduction to establish the cognitive contentfulness of the categories. There, he argues that the manner of combination characteristic of our consciousness is judgement, so that for sensibly given representations to be anything to us they must be of a kind that is combinable in judgements. Since judgements combine concepts or judgements, this means that what sensory consciousness, i.e. intuition, presents must exemplify the categories, as the concepts of an object in general (cf. *KrV*: B136-7; Ch. III.4).

However, we can abstract from the specific context of the Deduction, so that Kant’s claim about the nature of synthesis can shed light on the relation between consciousness of manifold representations and consciousness of the manner in which a manifold of representations is held

⁴² Kant writes: “[T]his principle of the necessary unity of apperception [...] declares as necessary a synthesis of the manifold [...] without which that thoroughgoing identity of self-consciousness could not be thought.” (*KrV*: B135) For a detailed reconstruction of this thought and its role in the argument of the Transcendental Deduction see Kitcher (2011: Ch. 9).

together in general, and thus between consciousness of manifold judgements and inference as the manner in which a manifold of judgements is held together in particular. The resulting thought is the following: If I were conscious of all my representations or judgements individually and without connection, I would have ‘as multicolored, diverse a self’ as I have representations or judgements. That is, just as sensibly given representations are “nothing for me” if they cannot be connected in a manner that enables me to be conscious of their belonging to one self-consciousness, so representations in general and thus judgements in particular would be nothing to me if they could not be held together with other representations or judgements in the unity of my self-consciousness (*KrV*: B132).⁴³

Now, the manner in which representations in general and judgements in particular are (at least implicitly) represented as connected in the unity of my self-consciousness is synthesis in general and inference in particular (cf. §§3 & 4.3). Consequently, my judgements are essentially potential premises (or conclusions) of inferences, and as such are essentially potential elements in a system of knowledge ordered by the forms of inference. Of course, this inferential unification of my empirical knowings in a science is not achieved by deductive inference alone, but requires a wider array of different forms of inference (cf. *KrV*: A646-7/B674-5). But, as I noted above, the synthetic account of inference that I have sketched, by considering deductive inference in particular, can be generalized to any form of inference (cf. §4.2).

Consequently, appreciating the hylomorphic relation between judgement (qua matter) and inference (qua form) enables us to understand the understanding as a full-fledged capacity to know. For, its characteristic kind of act, synthesis, is characteristic not only of intuition and judgement, making the understanding a capacity to know mind-independent objects in individual and

⁴³ This illustrates the sense in which the synthetic unity of apperception, as the concept of the unity of the manifold, is not only the essential basis of transcendental logic, but also of pure general logic (cf. *KrV*: B131, B134 n., B135).

unconnected empirical judgements, but also of inference, making the understanding furthermore a capacity to inferentially unify those judgements into a system of empirical knowledge that amounts to a science.

In other words, the use of the understanding – qua understanding (in the strict sense) and power of judgement – applied to the deliverances of sensibility yields empirical judgements; while the use of the understanding – qua reason – applied to the deliverances of the understanding – qua understanding (in the strict sense) and power of judgement applied to the deliverances of sensibility – yields a science (cf. *KrV*: A643-4/B671-2).

Kant says as much when he writes:

If the understanding may be a capacity of unity of appearances by means of rules, then reason is the capacity of the unity of the rules of understanding under principles. Thus it never applies directly to experience or to any object, but instead applies to the understanding, in order to give unity a priori through concepts to the understanding's manifold knowings (*Erkenntnisse*), which may be called the unity of reason, and is of an altogether different kind than any unity that can be achieved by the understanding. (*KrV*: A302/B359, my translation; cf. *KrV*: A664/B693)

Kant here distinguishes two kinds of unity: (1) The unity of the understanding, i.e. of the understanding (in the strict sense) and the power of judgement, as the unity of 'experiences', which is instantiated in each element of a manifold, i.e. a multiplicity of individual, unconnected, empirical knowings. (2) 'The unity of reason' as the unity of 'the understanding's manifold empirical knowings', which is instantiated in a science. Kant thus conceives of reason, considered logically, as the capacity to give inferential unity to the judgemental unities delivered by the use of the understanding, i.e. of the understanding (in the strict sense) and the power of judgement, applied to sensibility (cf. *KrV*: A645/B673).⁴⁴

⁴⁴ The qualification to reason's logical use matters, because as Kant notes we can also consider reason's use transcendently, as in the first *Critique's* Transcendental Dialectic (cf. *KrV*: A299/B355, A305-6/B362-3). Kant holds that unlike the transcendental use of the understanding in general (specifically, insofar as it conceives qua understanding in the strict sense, and insofar as it judges qua power of judgement) which yields self-knowledge of our capacity to know empirical objects in general, the transcendental use of reason yields mere illusions of such a capacity. Consequently, the investigation of the transcendental use of the understanding yields a (transcendental) "logic of truth" articulated in the Transcendental Analytic (specifically, in the Analytic of Concepts and the Analytic of Principles),

Accordingly, Kant conceives of a science, qua inferentially unified system of empirical knowings, as a hylomorphic unity with two aspects: (a) empirical knowings (qua matter of science), and (b) inferential rules for the unity of those knowings (qua form of science) (cf. *JL*: §95). As we have seen, both these aspects of a science – empirical knowings and inferential rules for the unity of empirical knowings – involve functions of the understanding or reason. Hence, the understanding or reason is a capacity simultaneously to know mind-independent objects and to inferentially unify those empirical knowings into a science.⁴⁵

6. Conclusion

The first two chapters of this dissertation showed that an adequate vindication of empirical judgement as knowledge has to take into account both the self-consciousness of judgement and the receptivity of operations of our senses. The previous chapter furthermore revealed that an account of empirical knowledge that is able to take into account both these elements must conceive of intuition, qua basis of empirical knowledge, hylomorphically. That is, it must understand receptive operations of sensibility and self-conscious acts of the understanding respectively as the determinable material and the determining formal aspects of intuition.

while the investigation of the transcendental use of reason merely yields a (transcendental) “logic of illusion (*Logik des Scheins*)” articulated in the Transcendental Dialectic (*KrV*: A131-2/B170-1; cf. A62-4/B87-8).

While the investigation of reason’s transcendental use is essential to Kant’s overall project in the first *Critique*, it goes beyond my aim of articulating our self-knowledge of our empirical knowledge. While the logical use of reason is necessary to logically connect empirical judgements in a system of empirical knowledge or a science, the transcendental use of reason seeks to establish synthetic a priori knowledge of the objects of traditional metaphysics (soul, world, God). Since my topic is the synthetic a priori knowledge of empirical knowledge (treated in the Transcendental Aesthetic and Transcendental Analytic) and not a priori knowledge of metaphysical knowledge (treated in the Transcendental Dialectic), my investigation is limited to the logical use of reason.

⁴⁵ Kant elaborates the role played by reason in the inferential unification of deliverances of the understanding – as the understanding (in the strict sense) and the power of judgement applied to sensibility – in the Appendix to the Transcendental Dialectic under the heading ‘On the regulative use of the ideas of pure reason’ (cf. *KrV*: A642-69/B671-97).

This final chapter has substantiated this Kantian hylomorphic account of empirical knowledge along two further dimensions: First, it argued that our capacity to know is not just a capacity to know mind-independent objects in individual and unconnected judgements based on intuition, as the previous chapter established, but it is furthermore a capacity to know a lawfully governed mind-independent reality by inferentially unifying those judgements into a science. Put differently, *rather than just affording us isolated glimpses of a world, our capacity to know affords us a unified conception of the world.*

Second, this chapter articulated the formal aspect, not just of our empirical knowledge, but of our knowledge in general. Specifically, it explained this formal aspect as synthesis, i.e. as the act of unifying representations in the consciousness of their unity in accordance with a synthetic function of the understanding.

Synthesis is the formal aspect of *empirical knowledge of mind-independent reality* because, as we saw in the previous chapter, the form of the synthetic functions of the understanding and the form of sensory presentations of mind-independent reality are both manifestations of the same original function of unity of the understanding. Put differently, *the form of thought agrees with the form of sensible being*, so that empirical knowledge is possible (cf. *KrV*: A126/7).

Synthesis is also the formal aspect of logical knowledge or *self-knowledge of the understanding and reason* as a capacity to think and know. For, in the course of this dissertation we have been gaining a priori self-knowledge of our capacity to judge as a capacity to empirically know mind-independent reality by drawing on that capacity's essential self-consciousness. And, as we saw in this chapter, this self-consciousness is nothing other than that capacity's synthetic activity. Hence,

*synthesis, as the form of acts of our capacity to know, is the form of the a priori self-knowledge of our capacity to know.*⁴⁶

⁴⁶ It remains a question that lies beyond the scope of this dissertation whether synthesis is the form of, i.e. whether we can have, any knowledge beyond our self-knowledge of our capacity to know and our empirical knowledge of mind-independent reality. However, this dissertation has illustrated the manner in which we would have to look for such knowledge, namely by self-conscious reflection on our capacity to judge. Kant acknowledges mathematical knowledge as a further kind of knowledge, but explicitly denies the possibility of any non-empirical metaphysical knowledge of a mind-independent reality.

BIBLIOGRAPHY

- Abela, Paul. *Kant's Empirical Realism* (2002).
- Allais, Lucy. "Transcendental Idealism and the Transcendental Deduction" *Kant's Idealism* [eds.] Dennis Schulting & Jacco Verburgt (2011): 91-107.
- . *Manifest Reality: Kant's Idealism and his Realism* (2015).
- Allison, Henry E. *Kant's Transcendental Idealism: An Interpretation and Defense* (2004).
- Ameriks, Karl. "Kant's Transcendental Deduction as a Regressive Argument" *Interpreting Kant's Critiques* (1978 [2003]): 51-66.
- Aquinas, Thomas. [*Summa*] *Summa Theologica*, 3 Vols. [trs.] Fathers of the English Dominican Province (1948).
- . [*De Veritate*]. *The Disputed Questions on Truth*, 3 Vols. [trs.] R. W. Schmidt, R. W. Mulligan & J. V. McGlynn (1954).
- Aristotle [*DA*]. *De Anima* [tr. & ed.] Christopher Shields (2016).
- . [*Meta.*]. *Metaphysics* [tr. & ed.] W. D. Ross (1924).
- . *Sense and Sensibilia* [tr.] J. I. Beare [ed.] W. D. Ross (1955).
- . [*De Int.*]. *De Interpretatione*. [tr.] J. L. Ackrill (1984).
- . [*An. Pr.*]. *Prior Analytics*. [tr.] A. J. Jenkinson (1984).
- Armstrong, D. M. *A Materialist Theory of the Mind* (1968).
- Arnauld, Antoine & Nicole, Pierre [*PRL*]. *Logic or the Art of Thinking*. [tr.] Jill V. Buroker (1996).
- Baier, Annette. "The Idea of the True God in Descartes" *Essays on Descartes' Meditations* [ed.] Amélie Oksenberg Rorty (1986).
- Beck, L. W. "Did the Sage of Königsberg Have No Dreams?" *Essays on Kant and Hume* (1978): 38-61.
- Bennett, Jonathan. *Kant's Analytic* (1966).
- Berkeley, George [*Principles*]. *A Treatise Concerning the Principles of Human Knowledge* [ed.] David R. Wilkins (2002).
- Boghossian, Paul. "What is inference?" *Philosophical Studies* Vol. 169, No. 1 (2014): 1-18.
- Boyle, Matthew. "Kant's Hylomorphism" (unpublished manuscript).
- Broome, John. *Rationality Through Reasoning* (2013).
- . "Comments on Boghossian" *Philosophical Studies* Vol. 169, No. 1 (2014): 19-25.
- Burge, Tyler. *The Origins of Objectivity* (2010).

- Campbell, John & Cassam, Quassim. *Berkeley's Puzzle* (2014).
- Carroll, Lewis. "What the Tortoise Said to Achilles" *Mind* Vol. 4, No. 14 (1895): 278-280.
- Cassam, Quassim. "Transcendental Arguments, Transcendental Synthesis and Transcendental Idealism" *The Philosophical Quarterly* Vol. 37, No. 149 (1987): 355-378.
- . *The Possibility of Knowledge* (2007).
- . "Tackling Berkeley's Puzzle" *Perception, Causation, and Objectivity* [eds.] Johannes Roessler, Hemdat Lerman & Naomi Eilan (2011): 18-34.
- Chudnoff, Elijah. *Intuition* (2013).
- Conant, James. "Two Varieties of Skepticism" *Rethinking Epistemology*, Vol. 2 [eds.] Guenter Abel & James Conant (2012): 1-73.
- . "Why Kant is not a Kantian" *Philosophical Topics* Vol. 44, No. 1 (2016): 75-125.
- . "Reply to Hamawaki: On the Relation of Cartesian to Kantian Skepticism and the Relation of Consciousness to Self-Consciousness" *The Logical Alien: Conant and His Critics* [ed.] Sofia Miguens (2020): 648-757.
- Descartes, René [*Meditations*]. "Meditations on First Philosophy" *Descartes Selected Philosophical Writings* [trs.] John Cottingham, Robert Stoothoff & Dugald Murdoch (1998).
- [*O&R*]. "Objections and Replies" *Descartes Selected Philosophical Writings* [trs.] John Cottingham, Robert Stoothoff & Dugald Murdoch (1998).
- [*Discourse*]. "Discourse on the Method" *Descartes Selected Philosophical Writings* [trs.] John Cottingham, Robert Stoothoff & Dugald Murdoch (1998).
- [*Principles*]. "Principles of Philosophy" *Descartes Selected Philosophical Writings* [trs.] John Cottingham, Robert Stoothoff & Dugald Murdoch (1998).
- [*Regulae*]. "Rules for the Direction of our Native Intelligence" *Descartes Selected Philosophical Writings* [trs.] John Cottingham, Robert Stoothoff & Dugald Murdoch (1998).
- [*Optics*]. "Optics" *Descartes Selected Philosophical Writings* [trs.] John Cottingham, Robert Stoothoff & Dugald Murdoch (1998).
- [*Comments*]. "Comments on a Certain Broadsheet" *Descartes Selected Philosophical Writings* [trs.] John Cottingham, Robert Stoothoff & Dugald Murdoch (1998).
- . "Letter to Mersenne 27 May 1630" *The Philosophical Writings of Descartes, Volume III: The Correspondence* [trs.] John Cottingham, Robert Stoothoff, Dugald Murdoch & Anthony Kenny (1991): 25-26.
- . "Letter to Mersenne 16 June 1641" *The Philosophical Writings of Descartes, Volume III: The Correspondence* [trs.] John Cottingham, Robert Stoothoff, Dugald Murdoch & Anthony Kenny (1991): 183-184.
- Dogramaci, Sinan. "Intuitions for Inference" *Philosophical Studies* Vol. 165, No. 2 (2013): 371-399.

- Engstrom, Stephen. "The Transcendental Deduction and Skepticism" *Journal of the History of Philosophy* Vol. 32, No. 2 (1994): 359-380.
- . "Understanding and Sensibility" *Inquiry* Vol. 40, No. 1 (2006): 2-25.
- . *The Form of Practical Knowledge* (2009).
- . "Self-Consciousness and the Unity of Knowledge" *11/2013 Bewusstsein/Consciousness* [eds.] Dina Edmundts & Sally Sedgwick (2016): 25-48.
- Evans, Gareth. *The Varieties of Reference* [ed.] John McDowell (1982)
- Falkenstein, Lorne. *Kant's Intuitionism: A Commentary on the Transcendental Aesthetic* (1995).
- Frege, Gottlob. *Posthumous Writings* (1979).
- Golob, Sacha. "The Separability of Understanding and Sensibility: A Reply to James Conant" *Critique* (2017): 1-5. (<https://virtualcritique.wordpress.com/2017/09/18/the-separability-of-understanding-and-sensibility-a-reply-to-james-conant/>)
- Gomes, Anil. "Kant on Perception: Naïve Realism, Non-Conceptualism, and the B-Deduction" *The Philosophical Quarterly* Vol. 64, No. 254 (2014): 1-19.
- . "Naïve Realism in Kantian Phrase" *Mind* Vol. 126, No. 502 (2017): 529-578.
- Guyer, Paul. "The Transcendental Deduction of the Categories" *The Cambridge Companion to Kant* [ed.] Paul Guyer (1992): 123-160.
- . "The Deduction of the Categories: The Metaphysical and Transcendental Deductions" *The Cambridge Companion to Kant's Critique of Pure Reason* [ed.] Paul Guyer (2010): 118-150.
- Hanna, Robert. "Kant and Non-Conceptual Content" *European Journal of Philosophy* Vol. 13, No. 2 (2005): 247-290.
- Hegel, G. W. F [*VGLP I*]. *Vorlesungen über die Geschichte der Philosophie I*, Werke 18 [eds.] Eva Moldenbauer & Karl Markus Michel (1986).
- [*VGLP III*]. *Vorlesungen über die Geschichte der Philosophie III*, Werke 20 [eds.] Eva Moldenbauer & Karl Markus Michel (1986).
- Held, Jonas. *Schlussfolgern* (2020).
- Henrich, Dieter. "The Proof-Structure of Kant's Transcendental Deduction" *The Review of Metaphysics* Vol. 22, No. 4 (1969): 640-659.
- Hlobil, Ulf. "Against Boghossian, Wright, and Broome on inference" *Philosophical Studies* Vol. 167, No. 2 (2014): 419-429.
- . "Inferring by Attaching Force" *Australasian Journal of Philosophy* Vol. 97, No. 4 (2019): 701-714.
- Hume, David [*Treatise*]. *A Treatise of Human Nature* [ed.] L. A. Selby-Bigge (1976).

- [Abstract]. “An Abstract of a Book lately published; entitled, A Treatise of Human Nature” *A Treatise of Human Nature* [ed.] L. A. Selby-Bigge (1976).
- [Enquiry]. *An Enquiry Concerning Human Understanding and Other Writings* [ed.] Stephen Buckle (2007).
- Kant, Immanuel [KrV]. *Kritik der reinen Vernunft* (1998); *Critique of Pure Reason* [eds.& trs.] Paul Guyer & Allen Wood (1999); *Critique of Pure Reason* [tr. & ed.] Werner S. Pluhar (1996).
- [Prolegomena]. *Prolegomena zu einer jeden künftigen Metaphysik, die als Wissenschaft wird auftreten können* (1920); *Prolegomena to any future Metaphysics that will be able to come forward as a Science* [tr. & ed.] James W. Ellington (2001).
- . “Kant’s Letter to Markus Herz, February 21, 1772” *Prolegomena to any future Metaphysics that will be able to come forward as a Science* [tr. & ed.] James W. Ellington (2001)
- [KpV]. *Kritik der praktischen Vernunft* (2003).
- [JL]. *Immanuel Kants Logik* (1904); “The Jäsche Logik” *Lecture on logic* [ed. & tr.] J. Michael Young (1992).
- [FS]. *Die Falsche Spitzfindigkeit der vier Syllogistischen Figuren* (1984); “The False Subtlety of the Four Syllogistic Figures” *Theoretical Philosophy, 1755-1770* [eds.] David Walford & Ralf Meerbote (2014).
- Kern, Andrea. “Spontaneity and Receptivity in Kant’s Theory of Knowledge” *Philosophical Topics* Vol. 34, No. 1 & 2 (2006): 145-162.
- . “Die “ursprüngliche” Form der Erkenntnis: Über Kants Hylemorphismus” *Philosophisches Jahrbuch* 125. Jahrgang / II (2018): 222-240.
- Kimhi, Irad. *Thinking and Being* (2018).
- Kitcher, Patricia. *Kant’s Thinker* (2011).
- Korsgaard, Christine. *The Sources of Normativity* (1996).
- Land, Thomas. “Kantian Conceptualism” *Rethinking Epistemology*, Vol. 1 [ed.] Guenther Abel & James Conant (2011): 197-239.
- Larmore, Charles. “The First Meditation: skeptical doubt and certainty” *The Cambridge Companion to Descartes’ Meditations* [ed.] David Cunniff (2014): 23-47.
- Lavin, Douglas. “Problems of Intellectualism: Raz on Reason and its Objects” *Jurisprudence* Vol. 2, No. 2 (2011): 367-378.
- Lichtenberg, Georg Christoph. *Aufzeichnungen und Aphorismen* (<http://www.zeno.org/Literatur/M/Lichtenberg,+Georg+Christoph/Aufzeichnungen+und+Aphorismen>).
- Locke, John [Essay]. *An Essay Concerning Human Understanding* [ed.] Peter H. Niddich (1995).

- Longuenesse, Béatrice. *Kant and the Capacity to Judge: Sensibility and Discursivity in the Transcendental Analytic of the Critique of Pure Reason* (1998).
- . “Kant’s Categories, and the Capacity to Judge” *Kant on the Human Standpoint* (2005): 17-38.
- Marcus, Eric. *Belief, Inference, and the Self-Conscious Mind* (2021).
- McCann, Edwin. “Skepticism and Kant’s B-Deduction” *History of Philosophy Quarterly* Vol. 2, No. 1 (1985): 71-89.
- McDowell, John. *Mind and World* (1996).
- . “The Woodbridge Lectures 1997. Having the World in View: Sellars, Kant, and Intentionality” *The Journal of Philosophy* Vol. 95, No. 9 (1998): 431-491.
- . “Hegel’s Idealism as a Radicalization of Kant” *Having the World in View* (2009): 69-89.
- . “Sensory Consciousness in Kant and Sellars” *Having the World in View* (2009 [2008]): 108-126.
- . “Perceptual Experience: Both Relational and Contentful” *European Journal of Philosophy* Vol. 21, No. 1 (2013): 144-157.
- . “Rationalism without Dogmas” *Giving a Damn: Essays in Dialogue with John Haugeland* [eds.] Zed Adams & Jacob Browning (2017): 311-328.
- McLear, Colin. “Kant on Animal Consciousness” *Philosophers Imprint* Vol. 11, No. 15 (2011): 1-16.
- . “Two Kinds of Unity in the *Critique of Pure Reason*” *Journal of the History of Philosophy* Vol. 53, No. 1 (2015): 79-110.
- Nagel, Thomas. *The Last Word* (1997).
- Onof, Christian & Schulting, Dennis. “Space as Form of Intuition and as Formal Intuition: On the Note to B160 in Kant’s *Critique of Pure Reason*” *Philosophical Review* Vol. 124, No. 1 (2015): 1-58.
- Peirce, C. S. “Issues of Pragmaticism” *The Monist* Vol. 15, No. 4 (1905): 481-499.
- Pippin, Robert. *Kant’s Theory of Form: Essay on the Critique of Pure Reason* (1992).
- Prichard, H. A. *Kant’s Theory of Knowledge* (1909).
- Rödl, Sebastian. “Self-Consciousness and Knowledge” (2013a).
- . “The single act of combining” (2013b).
- . *Self-Consciousness and Objectivity: An Introduction to Absolute Idealism* (2018).
- Ryle, Gilbert. “Sensation” *Collected Papers Vol. 2: Collected Essays 1929-1968* (2009 [1956]): 349-362.
- Sellars, Wilfrid. *Science and Metaphysics: Variations on Kantian Themes* (1968).

- Stern, Robert. [ed.] *Transcendental Arguments: Problems and Prospects* (1999).
- Strawson, Galen. "Mental ballistics or the involuntariness of spontaneity" *Proceedings of the Aristotelian Society* Vol. 103 (2003): 227-256.
- Strawson, P. F. *The Bounds of Sense: An Essay on Kant's Critique of Pure Reason* (1966).
- Stroud, Barry. "Transcendental Arguments" *Understanding Human Knowledge* (1968 [2000]):9-25.
- . "Inference, Belief, and Understanding" *Mind* Vol. 88, No. 350 (1979): 179-196.
- . "Skepticism and the Possibility of Knowledge" *Understanding Human Knowledge* (1984a [2000]): 1-8.
- . "The Allure of Idealism" *Understanding Human Knowledge* (1984b [2000]): 83-98.
- . "Understanding Human Knowledge in General" *Understanding Human Knowledge* (1989 [2000]): 99-121.
- . "Perceptual Knowledge and the Primacy of Judgement" *Journal of the American Philosophical Association* Vol. 1, No. 3 (2015): 385-395.
- . "Kant's "Transcendental Deduction"" *Kant's Critique of Pure Reason: A Critical Guide* [ed.] James R. O' Shea (2017): 106-119.
- Tegtmeier, Maximilian. "Overcoming Epistemic Compositionism by Appreciating Kant's Insight" *Synthese* Vol. 200, No. 44 (2022): 1-37.
- Tolley, Clinton. "The Non-Conceptuality of the Content of Intuitions: A New Approach" *Kantian Review* Vol. 18, No. 1 (2013): 107-136.
- Valaris, Markos. "Reasoning and Regress" *Mind* Vol. 123, No. 489 (2014):101-127.
- Van Cleve, James. "Reliability, Justification, and the Problem of Induction" *Midwest Studies in Philosophy* Vol. 9, No. 1(1984):555-567.
- . *Problems From Kant* (1999).
- Velleman, J. D. *The Possibility of Practical Reason* (2000).
- Vinci, Thomas C. *Space, Geometry, and Kant's Deduction of the Categories* (2015).
- Wedgwood, Ralph. "Justified Inference" *Synthese* Vol. 189, No. 2 (2012): 273-295.
- Williams, Bernard. *Descartes: The Project of Pure Enquiry* (1978).
- Winters, Barbara. "Inferring" *Philosophical Studies* Vol. 44, No. 2 (1983): 201-220.
- Wolff, R. P. *Kant's Theory of Mental Activity: A Commentary on the Transcendental Analytic of the Critique of Pure Reason* (1963).
- Wright, Crispin. "Comment on Paul Boghossian, "What is inference?"" *Philosophical Studies* Vol. 169, No. 1 (2014): 27-37.