

Kant, Hume, and the Notion of Material Substance

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THESIS

Submitted as partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Philosophy
in the Graduate College of the
University of Illinois at Chicago, 2013

Chicago, Illinois

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For my parents, Dwaine and Arminty.

ACKNOWLEDGEMENTS

I would like to thank Sally Sedgwick, who served as my primary advisor. Her advice and guidance have been invaluable. She has improved my writing, my teaching, and my scholarship. For comments and advice, I am also very much indebted to other the members of the dissertation committee: Daniel Sutherland, Rachel Zuckert, David Hilbert and Peter Hylton. I would also like to thank Andrew Blom, Rogério Severo, Maria Balcells, Jessica Gordon-Roth, Mae Zarnitsyn Liou, Aleks Liou Zarnitsyn, Valerie Brown, Charlotte Jackson, Alexander Dolnick, Barbara Martin, Cullen Walsh, Kent Schmor, David Svolba, Craig Fox, David Harker, Ken Martin and Tina Fender Gibson for helping me over the years. Finally, I would also like to thank my family: Dwaine Brewer, Arminty Brewer, Krista Capps, Daniel Capps, Arianna Druckenmiller, James Druckenmiller and Niklaus Druckenmiller. Without their unwavering support, I never would have entered philosophy.

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LIST OF ABBREVIATIONS

CPR	<i>Critique of Pure Reason</i>
EHU	<i>An Enquiry Concerning Human Understanding</i>
MFNS	<i>Metaphysical Foundations of Natural Science</i>
Prolegomena	<i>Prolegomena to Any Future Metaphysics</i>
Treatise	<i>A Treatise of Human Nature</i>

SUMMARY

In *A Treatise of Human Nature*, David Hume claims that the concept of substance, be it material or immaterial substance, is a fiction of the imagination. He maintains that we have no justification for positing the existence of substance. Instead, he argues the idea of substance is merely a fiction of the imagination; it is a confused idea that philosophers utilize in an attempt to explain aspects of the world that they do not understand.

In his *Critique of Pure Reason*, Kant argues that certain concepts are necessary for our form of experience. He attempts to prove that the concept of material substance is one such concept. Kant claims that whenever we experience objects, we experience them temporally and maintains that our form of experience is necessarily temporal. Kant holds that temporal experience would not be possible without presupposing the concept of substance. This is because he believes that our notion of time necessarily assumes an underlying permanent. Kant dubs this permanent “substance.” Kant separates his proof of the necessity of the concept of material substance into two parts. In the First Analogy, he attempts to show that the concept of substance in general is necessary for our form of temporal experience. In the Refutation of Idealism, he attempts to show that the concept of *material* substance is a necessary concept.

In this dissertation, I examine Kant’s proofs as they relate to Humean skepticism. I first consider what Hume means when he claims that the concept of material substance is merely a fiction of the imagination. Next, I examine Kant’s proofs in the First Analogy and the Refutation

of Idealism. I argue that while the underlying assumptions Hume makes in the *Treatise* assume a Kantian notion of substance in general (i.e., Hume is unknowingly committed to the conclusion of the First Analogy), they do not commit him to Kant's notion of material substance (i.e., Hume is not committed to the conclusion of the Refutation of Idealism).

Introduction

In *A Treatise of Human Nature* (hereafter *Treatise*), David Hume claims that the concept of substance, be it material or immaterial substance, is a fiction of the imagination. He maintains that we have no justification for positing the existence of substance. Instead, he argues the idea of substance is merely a fiction of the imagination; it is a confused idea that philosophers utilize in an attempt to explain aspects of the world that they do not understand.

In his *Critique of Pure Reason* (hereafter *CPR*), Kant argues that certain concepts are necessary for our form of experience. He holds that the concept of material substance is one such necessary concept. He holds that our form of experience is necessarily temporal. That is, whenever we experience objects, we must experience them temporally. Kant ties the notion of substance to temporality. He argues that temporal experience would not be possible without presupposing the concept of substance. This is because Kant believes that our notion of time necessarily assumes an underlying permanent, which he calls “substance.” But, according to Kant, substance in general is not enough to give rise to our experience of time. He argues that we must assume the concept of material substance.

Kant constructed his argument after reading Hume and his account is clearly influenced by his reading of Hume. In fact, in *CPR*, he claims that if Hume had recognized that certain concepts are necessary for our form of experience, then he, too, would have recognized the necessity of the concept of material substance.

In this dissertation, our goal is to understand Kant's notion of material substance as it relates to Humean skepticism. In the five chapters that follow, we will (a) explain Hume's claim that the concept of material substance is merely a fiction of the imagination, (b) explain Kant's argument that the concept of material substance is necessary for our form of experience, and (c) examine whether or not the claims Hume makes in the *Treatise* assume a Kantian notion of material substance. If Hume's account in the *Treatise* relies upon a Kantian notion of material substance, then we must reject Hume's claim that the notion of material substance is merely a fiction of the imagination.

In chapter 1, we consider Hume's argument that the concept of material substance is merely a fiction of our imagination. In part I, we first explain what Hume means by material substance. He argues material substance has 1) unity, 2) is the bearer of certain properties, 3) possesses independent existence and 4) persists unchanged through time. We examine his account of each of these properties and how they relate to the concept of material substance. In part II, we explain why Hume argues that we cannot justifiably ascribe these properties to the idea of material substance. Finally, in part III, we turn our attention to Hume's notion of a fiction and consider why he believes the idea of material substance is a fiction.

In chapter 2, we consider some of the concepts and background assumptions that will aid in our understanding of Kant's response to Hume. We will see that Kant and Hume have importantly different accounts of causality and these accounts play an important role in their claims about material substance. In the first part, we consider Hume's account of causality. We consider why Hume believes that our claims about causality lack justification and how his

account of causality relates to his claims about the concept of material substance. In part II, we turn to Kant's notion of causality. We highlight some of the important ways that it differs from Hume's account and how these differences will aid in our understanding of Kant's notion of material substance.

Our focus in chapter 3 is Kant's proof in the First Analogy. The First Analogy purports to prove that the concept of substance in general is a necessary concept for our form of experience. Kant uses the result of the First Analogy when he attempts to prove that the concept of material substance is also necessary for our form of experience. Thus to understand Kant's claims about material substance, we must first understand his claims in the First Analogy. Before examining Kant's proof, we consider how closely the notion of substance Kant employs in the First Analogy relates to the notion Hume rejects in the *Treatise*. In part II, we turn to Kant's proof. Our goal is to understand Kant's proof and how the proof relates to Hume's claims in the *Treatise*.

In chapter 4, we consider the validity of Kant's proof in the First Analogy. Several influential commentators have pointed to possible errors in Kant's reasoning. We consider some of these worries and show that our explication of the First Analogy in chapter 3 saves Kant from these difficulties. We will see that if we accept Kant's assumptions, then we are committed to the conclusion of the First Analogy. In examining the potential problems with the proof, we also highlight how our reading of the First Analogy differs from that of other commentators.

Finally, in chapter 5, we turn our attention to Kant proof of material substance and its relation to Humean skepticism. As we have noted, in the First Analogy, Kant provides his proof

for the necessity of the concept of substance in general. If we accept Kant's assumptions, we are committed to the result of the First Analogy. In the Refutation of Idealism, Kant uses the results of the First Analogy and attempts to show that the concept of material substance is also necessary for our form of experience. Our goal in the chapter is twofold. We (1) attempt to provide a general account of Kant's proof of in the Refutation of Idealism and (2) consider whether or not Kant's proofs really would have convinced Hume, assuming Hume had granted that certain concepts are necessary for our form of experience. Thus we consider whether or not Hume is committed to the assumptions necessary for the First Analogy and the Refutation of Idealism. We will see that given his claims in the *Treatise*, Hume appears to be committed to the assumptions needed for the First Analogy to succeed. That is, many of his claims in the *Treatise* assume what Kant calls the "principle of persistence." However, Hume is not committed to the assumptions needed to prove the Refutation of Idealism. His arguments assume an underlying substance, but that substance could be material or immaterial. Thus Hume should not have rejected the concept of substance in general but his claims in the *Treatise* do not commit him to accept material substance as a necessary concept.

Chapter 1: Hume and the Fiction of Material Substance

Throughout his *Treatise of Human Nature*, David Hume argues that our idea of material substance lacks justification. While philosophers often utilize the idea of material substance to explain features of objects (e.g. how they persist through time), Hume argues that in doing so, they are appealing to a “fiction.” But Hume’s use of the term “fiction” does not correspond to the common definition of the term. In this chapter, we explain why Hume believes that the idea of material substance is a fiction. In the first section, we provide the notion of material substance that Hume rejects. In the second section, we examine why our idea of material substance lacks justification, according to Hume. In doing so, we will also examine Hume’s account of why we are led to posit the fiction of material substance. Finally, we explain exactly what Hume means by “fiction” throughout the *Treatise*.

I. The Notion of Material Substance that Hume Rejects

In his *Treatise*, Hume attacks the idea of material substance. He claims that the idea of material substance is merely a fiction of the imagination. Before we examine why he makes this claim and exactly what it means, we need to consider exactly what idea of material substance he has in mind. After all, philosophers disagree as to what should be included in this idea. Unfortunately, Hume does not explicitly describe the idea he attacks. However, we can reconstruct his thinking by considering his attacks and the few claims he makes about material substance.

The idea of material substance that Hume rejects includes several important features. Material substance is supposed to: 1) be a unity, 2) be the bearer of certain properties, which are said to inhere in it, 3) have independent existence, and 4) persist unchanged through time.¹ In this section, we explain each of these features and why they are important components of this idea of material substance. While we identified four different features, each of these is very closely tied to the others, on Hume's account. An explanation of any of these features thus requires reference to the others.

The idea that material substance is unified (or as Hume sometimes puts it, as "a unified something") occurs in a few places in the *Treatise*. This feature of our idea of material substance arises, in Hume's view, because our ideas of material objects involve several distinct qualities. These qualities are supposed to be connected in some manner. For example, when we conceive of a peach or melon, "the colour, taste, figure, solidity, and other qualities, combin'd in a peach or melon, are conceiv'd to form *one thing*" (*Treatise*, 1.4.3.5).² Hume believes that most everyone who carefully considers their idea of material objects will grant that these objects are composed of various distinct qualities. He writes,

'Tis confest by the most judicious philosophers, that our ideas of bodies are nothing but collections formed by the mind of the ideas of the several distinct sensible qualities, of which objects are compos'd...But however these qualities may in themselves be entirely distinct, 'tis certain we commonly regard the compound, which they form, as ONE thing....³ (*Treatise*, 1.4.3.2.)

¹ These are not the only features that philosophers' have attached to the idea of substance, but I hold that they are the features pertinent to a discussion of the notion of material substance that Hume rejects.

² Hume's emphasis unless otherwise noted.

³ It is important to note that Hume seems to use the terms "compound" and "complex" interchangeably.

As Hume indicates, we can consider these sensible qualities in two different ways: we can focus on any of the distinct qualities separately (e.g., I can focus on the sensation of color), or we can focus on the unified object these qualities compose (i.e., I can focus on the peach). Given that we can distinguish the distinct sensible qualities of the peach such as taste, color, etc. from the idea of the peach as a unified object, we might wonder how, exactly, the distinct qualities are related to that thing which we call the peach.

Hume claims that in order to explain how distinct qualities are unified in an object philosophers argue that our idea of the peach as a single object arises because we assume there is something underlying the various sensible qualities we ascribe to the peach. This underlying something, which philosophers have often dubbed a “substratum,” supposedly “sustains and supports” these sensible qualities (*Treatise*, 1.4.3.6). Exactly how this substratum sustains and supports these qualities isn’t quite clear, but there are certain features of the connection between the substratum and its properties that are usually accepted (and with which Hume finds fault). In the *Treatise*, Hume considers two traditions which have attempted to provide an explanation of the relationship between a substance and the properties that inhere in it. We turn, now, to briefly consider each of these.

Hume first examines how the Aristotelians dealt with the notion of substance and the properties it supports. In Hume’s explication, the Aristotelians held that material substance, or *original* matter, is the same in all bodies. They claimed that elements like fire, water, earth and air are all composed of the very same substance. This is obviously somewhat problematic because we perceive differences in fire and water, etc. To explain how different elements can be

composed of the same underlying material but still display obvious diversity, the Aristotelians turned to the idea of a substantial form. The idea is that while the underlying material of bodies is the same, each displays a different substantial form (*Treatise*, 1.4.3.6). The different forms that material substance takes are supposed to cause the perceived differences in bodies.

Hume believes that thinking of substance in this way leads us to differentiate between essential and accidental qualities in objects. He writes, "The notion of *accidents* is an unavoidable consequence of this method of thinking with regard to substances and substantial forms" (*Treatise*, 1.4.3.7). According to Hume, the notion of accidents, or accidental qualities, arises because if we maintain that all bodies are really composed of the same underlying substance, then we will be led to treat differences we observe in bodies as merely accidental. The observable differences are referred to as "accidents" of the substance because they require a substance to sustain them. Here, the idea of a property whose existence is *accidental* should be contrasted with the idea of something whose existence is *essential*. The properties are accidental in the sense that they rely on the existence of something else, a material substance, which is more primitive. Hume claims that once we posit material substances which do not depend on anything else for their existence, we are led to consider qualities like "colours, sounds, tastes, figures, and other properties of bodies, as existences, which cannot subsist apart, but require a subject of inhesion to sustain and support them" (*Treatise*, 1.4.3.7).

This distinction between what is essential and what is accidental also allows the Aristotelians to explain how a supposedly unified object can display diverse properties and display change over time. Though we can consider the color, shape, taste, texture, etc., of a

peach separately, we can also treat these qualities as features of a single object. We then presuppose that these qualities inhere in an underlying substratum. The “accidental” nature of these properties helps to explain how a single object can display significantly different properties over time. If the properties that change are not essential features of the object in question, if they are instead merely accidental features that are dependent upon an essential underlying substratum, we can explain how two seemingly different objects, e.g., a ripe peach at T_1 and a rotten peach at T_9 , are actually a single object that has undergone change. While its accidental qualities may have changed over time, its essential features, which sustain and support the accidental qualities, remain the same.

The moderns, Hume notes, reject the distinction between material substance and substantial form.⁴ Instead, they distinguish certain perceptible qualities, usually called “secondary qualities,” from the “primary qualities” which give rise to them. According to the moderns, qualities like sounds, colors, etc. are secondary qualities. As such, they have merely “internal” existence and “arise from causes, which in no way resemble them” (*Treatise*, 1.4.4.8). That is, they are qualities that exist merely in the mind of a perceiver. According to this picture, primary qualities cause the secondary qualities. The primary qualities are assumed to be the only “real” qualities of material substance (*Treatise*, 1.4.4.5). Hume claims, “These primary qualities are extension and solidity, with their different mixtures and modifications; figure, motion, gravity and cohesion” (*Treatise*, 1.4.4.5). According to the view that Hume ascribes to

⁴ The term “moderns” here refers to Hume’s contemporaries.

the moderns, we experience primary qualities and they cause us to perceive secondary qualities like colors, sounds and tastes.

The moderns use the distinction between primary and secondary qualities to explain how what appears to be a single object of perception can produce two conflicting sensations. The distinction can explain, for example, how the same piece of fruit can taste bitter to one person and sweet to another. The moderns claim that though the underlying matter and primary qualities which produce the sensations are the same in this case, the variations we perceive “depend upon several circumstances” (*Treatise*, 1.4.4.3). For example, the moderns believe that the “different complexions and constitutions of men” produce different sensations (*Treatise*, 1.4.4.3). The fact that two people can have different secondary qualities caused by the same primary qualities entails that the secondary qualities need not resemble the primary qualities (*Treatise*, 1.4.4.4). Sensible bodies also differ, on this conception, in that they are different arrangements of “figure and motion,” though the substance underlying them is the same. These different arrangements also lead us to perceive different qualities. For example, on Hume’s account, the moderns use this distinction between to explain how a single object can display change over time. On this view, the arising and perishing of qualities such as the “generation, increase, decay, and corruption of animals and vegetables, are nothing but changes of figure and motion” (*Treatise*, 1.4.4.4).

Our judgments that we perceive changing qualities of objects also helps explain why philosophers single out something as an underlying substratum. If we believe that any sensible quality we perceive in the object could change (i.e., that it could come into or go out of

existence), while the object itself remains, we have reason to think that there must be something underlying the sensible qualities that constitutes what essentially is the object. We suppose that this underlying substratum binds the different successive perceptions of the object together.

While the Aristotelians and moderns provide different explanations of how an underlying substratum produces bodies with perceptible diversity, they both maintain that the underlying substratum remains unchanged and the qualities in bodies that differ are dependent on the underlying substratum. Hume claims that once we posit material substances which persist through time and do not depend on anything for their existence, we are led to consider qualities like “colours, sounds, tastes, figures, and other properties of bodies” as accidents or secondary qualities. That is, we consider these qualities to be “existences, which cannot subsist apart, but require a subject of inhesion to sustain and support them” (*Treatise*, 1.4.3.7).

To get a better picture of the notion of material substance that Hume rejects and its supposed relation to sensible qualities, we must briefly examine some of his general views about the origin of ideas. He claims that, “all of the perceptions of the human mind resolve themselves into two distinct kinds which I shall call impressions and ideas” (*Treatise*, 1.1.1.1). According to Hume, our ideas of material objects are derived from a series of distinct impressions. It is important to note that when he uses the term “perception,” he is not limiting the term to refer to our sense perceptions. Instead, Hume uses the term perception quite broadly. “Perception,” for Hume, describes anything present to the mind, be it a sensation, an

idea, an emotion, etc.⁵ Furthermore, he claims that the *only* things that can be present to the mind are perceptions (*Treatise*, 1.2.6.7). These perceptions can differ, in his view, in “degrees of force and liveliness” with which they are presented to the mind (*Treatise*, 1.1.1.1). The perceptions which are the most vivid and lively he dubs “impressions.” These impressions are either sensations (our external impressions like sight, smell, taste) or reflections (our internal impressions, such as our passions and emotions). The more faint images present to the mind Hume calls “ideas.” These ideas, like our impressions, can also be separated into ideas of sensation or ideas of reflection. So according to Hume, an idea of an object differs from an impression of an object by the vivacity with which it is presented to the mind.⁶

⁵ In his book *Hume*, Barry Stroud provides an interesting discussion of why Hume uses the term “perception” as opposed to “ideas” to refer to all objects of the mind. Stroud argues that Hume uses the term to avoid a difficulty found in Locke’s *An Essay Concerning Human Understanding*. Locke uses the term “idea” as a blanket term for objects of the mind. In doing so, Locke has “no easy way to make the distinction between sensation and thought.” By using the term “perception” to cover all objects of the mind and by separating perceptions into “ideas” and “impressions”, Hume is able to maintain the distinction between sensation and thought and restore “the term ‘idea’ to its original sense, from which [Hume] says Locke had perverted it” (Stroud, pp. 18-19). While Hume may restore the term “idea” to its original sense, he seems to distort the sense of “perception” by using the term “perception” to cover ideas.

⁶ While Hume is clear that we can usually distinguish between impressions and ideas by considering the degree of force or liveliness with which they are presented to the mind, he grants that the degree of force or liveliness of ideas and impressions is not fixed. While, in general, impressions are more vivid or lively than ideas, he provides examples in which the distinction seems to break down. For instance, a dream, though it involves ideas, can be nearly as lively as an impression (see *Treatise*, 1.1.1.1). In his *Enquiry Concerning Human Understanding* (hereafter, *EHU*), Hume implies that in the mind of the insane, some ideas may be indistinguishable from impressions (*EHU* 2.1.1.). Because Hume blurs the line between impressions and ideas, some scholars have sought alternate means of distinguishing between the two in Hume’s corpus. For example, in his article, “Hume’s Impression/Idea Distinction,” David Landy argues that the proper way to distinguish between impressions and ideas is to use Hume’s copy principle. That is, impressions are original mental entities while ideas are copies of mental entities (pp. 119-139). While the prospect of finding a definitive means of distinguishing impressions and ideas is quite interesting, I will not comment on it further. For our purposes, it is only necessary that Hume believes there is some means of distinguishing between ideas and impressions.

In order to understand the impact these claims about ideas and impressions have on Hume's analysis of the idea of material substance, we will turn to a specific example. Consider an idea of an object that we perceive to undergo change over time. My idea of a lit candle, for example, reflects the judgment that it will change significantly over a period of time. I believe that a lit candle will change, according to Hume, because I have an impression of a lit candle at T_1 and I have an impression of a lit candle at some other time, say T_5 , which is melted. Although the impressions T_1 and T_5 are different, I judge these to be of the very same candle. We often make judgments like these, even when the two impressions are drastically different. So according to Hume, not only do we claim that several distinct sensible qualities form a single unified object, "we commonly regard the compound, which they form...as continuing the SAME under very considerable alterations" (*Treatise*, 1.4.3.2).

The impressions constituting our ideas change radically. What justification do we have for considering changing impressions to be impressions of a single object? Hume claims that in order to answer this question, we rely on the idea of material substance. Only if we regard material substance not merely as a substratum, but as an *immutable* substratum persisting through the changes to the object, do we consider ourselves justified in our ascription of identity to objects that change over time. We assume that the notion of immutability is necessary for the idea of material substance because we look for something that remains unchanged through time that can 'link' an object from one time to another, even if its sensible qualities have changed. Though the perceived qualities may change, if we believe that the underlying substratum that supports and sustains these qualities remains the same, we consider

ourselves justified in claiming that the qualities belong to the same object. Thus we can claim that the changing attributes all belong to the very same thing (even though, Hume claims, we have no impression of this substratum).

In this section, we considered four different features of the common idea of material substance. According to this picture, a material substance 1) is a unity, 2) is the bearer of certain properties, 3) possesses independent existence and 4) persists unchanged through time. In the next section, we will consider both why our claims about material substance lack justification and why the idea of material substance itself lacks justification. Once we understand why he claims that our claims about material substance and the idea of material substance lack justification, we can understand why he claims that the idea of material substance is a fiction of the imagination.

II. Why the Idea of Material Substance Lacks Justification

In this section, we consider Hume's assertion that we cannot justifiably attribute any of the four features we considered above to material substance. As we have seen, Hume argues we use the idea of material substance to explain how a multiplicity of changing sensible qualities can form a unified object. If we do not invoke the idea of material substance, we are left with a seeming contradiction: something must be both a unity and display diversity at the same time. However, Hume attempts to show that any claims we make about material substance are unfounded and the idea of material substance itself lacks evidential support. After calling our evidence for the idea of material substance into question, Hume offers an alternative explanation for removing the apparent contradictions, one which does not involve the idea of material substance.

In the first part of this section, we will examine Hume's distinction between matters of fact and relations of ideas. We focus our attention on how these different types of propositions are justified and how our ideas are legitimized. Next, we will focus on Hume's argument against of the unity of material substance. We will then consider why, according to Hume, treating substance as persistent lacks justification. Finally, we will consider why Hume thinks we are unjustified in claiming that material substance is the bearer of certain properties and displays external existence.

A. Hume and the Justification of Propositions

Before we turn to the matter of why the idea of material substance lacks justification, we must first highlight an important distinction Hume makes concerning how we justify different types of propositions. This is important for our purposes because Kant's principle of persistence is a proposition concerning substance. In the First Analogy and the Refutation of Idealism, Kant attempts to show that (a) the idea of material substance is not only legitimate but necessary for our form of experience, and (b) we can justifiably make certain claims about material substance.

Hume believes that anything about which we are able to reason must fall into one of two categories. He writes, "All objects of human reason or enquiry may naturally be divided into two kinds, to wit, *Relations of Ideas* and *Matters of Fact*" (EHU, 4.1.1). One of the ways that relations of ideas and matters of fact differ involves how the claims of each are justified. Unfortunately, Hume does not explicitly state whether our claims about material substance are

matter of fact claims or relations of ideas.⁷ However, many of Hume's arguments imply that claims about material substance are matter of fact claims. In ruling out the possibility that our claims concerning material substance can be justified by appealing to matters of fact, he attempts to show that our idea of material substance lacks justification. He argues that all ideas are derived from corresponding impressions and we have no impression of material substance. Thus our claims about material substance are unfounded. We will also see that once we properly understand how Hume uses the term "fiction" throughout the *Treatise*, he rules out the possibility of justifying claims about material substance by appealing to relations of ideas. Before we consider why claims about material substance cannot be justified, according to Hume, we must consider the distinction between relations of ideas and matters of fact more carefully.

Hume's examples of relations of ideas are the propositions "the square of the hypotenuse is equal to the square of the two sides" and "three times five is equal to the half of thirty" (*EHU*, 4.1.1). Propositions that express relations of ideas are "discoverable by the mere operation of thought, without dependence on what is any where existent in the universe" (*EHU*, 4.1.1). Hume further argues that we can prove propositions expressing relations of ideas demonstratively because the denial of such a proposition implies a contradiction. We can demonstrate that $3 \times 5 = 30/2$ in a proof because if 3×5 did not equal $30/2$, a contradiction would

⁷ Hume expresses the distinction between matters of fact and relations of ideas most clearly in his *EHU*, but he does not discuss material substance in *EHU*. While Hume certainly holds the distinction between matters of fact and relations of ideas in the *Treatise* (including how such claims are justified), he never explicitly ties this discussion to his claims about how propositions about material substance should be justified.

arise. Given the way that we define all of the terms involved, 3×5 would have to both equal 15 and not equal 15 (because $3 \times 5 = 15$ and $30/2 = 15$ but $3 \times 5 \neq 30/2$).

Hume suggests that another important feature of relations of ideas that we must highlight is that propositions concerning relations of ideas are known *a priori*; we can prove propositions describing relations of ideas without reference to our perception of objects in the world. Say I define a triangle in the following way: “triangle” $\stackrel{\text{def}}{=}$ “three-sided closed figure.” Given the way I have defined “triangle,” we can demonstrate the falsity of the proposition “an acute triangle has four sides.” We can do this merely by appealing to the definitions of the concepts involved. We need not appeal to our perception of triangles out in the world. It would be impossible to conceive of a four-sided triangle, while retaining our definition of a triangle. Hume writes, “Though there never were a circle or triangle in nature, the truths, demonstrated by EUCLID, would for ever retain their certainty and evidence” (EHU, 4.1.1).

Hume believes that these relations of ideas are distinct from what he calls “matters of fact.” The proposition “the sun will rise tomorrow” is a matter of fact. Unlike the proposition “an acute triangle has four sides”, the proposition “the sun will not rise tomorrow” does not imply a contradiction, on Hume’s account. This latter proposition, he writes, “is no less intelligible a proposition, and implies no more contradiction, than the affirmation, *that it will rise*” (EHU, 4.1.2). That is to say, while I can conceive of a world in which the sun does not rise tomorrow, I cannot conceive of a four-sided triangle. Furthermore, matters of fact, unlike relations of ideas, are known *a posteriori*. Thus, our justification for our matter of fact claims involves an appeal to experience. We determine the truth or falsity of the proposition “the sun

will rise tomorrow” by appealing to our experience of the world. If the sun has risen every day up to today, we take this to count as evidence in the proposition’s favor. While Hume famously calls into question the justification for any matter of fact claim, we need not turn to his argument here.⁸ For our purposes, we need only to recognize that Hume treats many of our claims about material substance and its properties as matter of fact claims, and as such their justification must come from experience.

Assuming that Hume’s distinction between relations of ideas and matters of fact holds, should we classify all of our claims about material substance as matter of fact claims?⁹ According to Hume, we posit the idea of material substance to explain certain aspects of objects of our experience (like how a single object can display diverse properties). Thus, if our claims are justifiable, then that justification will come from experience (i.e., we will point to an impression to justify our claims). Another reason we might think that claims about material substance are matters of fact is because while the proposition “an acute triangle has four sides” implies a contradiction, on the surface, the claim “there is no substratum underlying objects of experience” does not seem contradictory. Though it is impossible to conceive of a four-sided triangle, it certainly seems possible to conceive of perceptions that lack something underlying them. Because Hume believes that our claims concerning material substance are matter of fact claims, he attempts to show that while philosophers look to experience to justify their claims, experience cannot provide the justification they seek. He attempts to show that the idea of

⁸ See *EHU*, 4.1.1-4.2.23.

⁹ For example, the proposition “material substance has the following properties: 1) it is a unity, 2) it is the bearer of certain properties, 3) it possesses independent existence and 4) it persists unchanged through time.”

material substance is unfounded and there is no possible experience from which that idea could be derived. To further undermine the idea of material substance, he also attempts to provide an alternate explanation for the apparent contradictions (e.g., something being a unity and displaying diversity at the same time) that the idea of material substance is used to solve.

One might think that since the idea of material substance is used to solve an apparent contradiction, our justification for propositions about material substance should be classified as relations of ideas. However, Hume believes that if our ideas are to be genuinely representative, they must have a corresponding impression. If they do not have a corresponding impression, they are fictions. He writes, “Ideas always represent the objects or impressions, from which they are deriv’d, *and can never without a fiction* represent or be applied to any other” (*Treatise*, 1.2.3.11, my emphasis).¹⁰ So in order to be genuinely representative, our idea of material substance must have a corresponding impression which it represents; otherwise it is merely a fiction of the mind. In section III, we consider what Hume means by “fiction.” His notion of “fiction” is important because it will further rule out the possibility of treating our claims about material substance as relations of ideas. But before we consider Hume’s notion of fiction, we consider Hume’s claim that we have no impression of material substance.

In order to demonstrate why our idea of material substance lacks empirical justification, we need to consider why Hume claims that each of the four features of material substance, which we considered in the last chapter, cannot be justifiably attributed to material substance. Hume’s arguments that we have no justification for either the unity or the persistence we

¹⁰ In the next section, we will consider which ideas are genuinely representative and which are not when we examine Hume’s distinction between ideas and impressions more carefully.

associate with our idea of material substance (features 1 and 4 above) are quite similar. In each case, he claims, we turn to the idea of material substance to reconcile an apparent contradiction, but we are not warranted in positing the idea of material substance. Moreover, he is convinced that there is an easier means of removing the apparent contradiction we face.

1. The Unity of Material Substance

In the case of unity, a contradiction arises because, as we observed in the last section, we often treat our impressions of distinct qualities, like the color, shape, etc. of a peach, as features of a single thing. We do so because of the way that we interpret our impressions. When we perceive an object like a peach, we take ourselves to also perceive what Hume calls a “strong relation” between its parts (*Treatise* 1.4.3.5). That is, we conceive of the color, shape, etc., as closely connected to one another. According to Hume, this idea of a strong relation leads us to treat these different parts “as if perfectly uncompounded” (*Treatise*, 1.4.3.5).

In order to generate a contradiction, Hume treats “simplicity” and “unity” as synonyms (*Treatise* 1.4.3.2). Hume’s justification for treating these words synonymously seems to be that a simple object is an object without divisible parts. It is indivisible and therefore possesses unity; that is, unity for Hume means indivisibility. He holds that something we consider to be a complex object (an object with more than one part), does not display this unity; instead it displays number or diversity. When considering a complex object, we can focus on each of the different qualities individually. Thus that object must be both simple and diverse at one and the same time. If this is Hume’s argument, it seems to beg the question against the Aristotelians and moderns. If we define simplicity as unity, then we start from a position in which a complex

object cannot be unified. Both the Aristotelians and moderns would have rejected this definition, so Hume's argument here appears rather problematic.

Though Hume's argument appears to beg the question, he has more to say on the issue. As we saw earlier, both Aristotelians and moderns recognized the difficulty of accounting for the unity and diversity of objects and each attempted to explain how a unity can underlie diversity. Hume examines both explanations and argues that neither provides adequate justification for the idea of material substance.

As we have seen, the Aristotelians turned to the distinction of essential and accidental qualities to justify treating our idea of a complex object which displays diversity as a single unified object. They claimed that the underlying substratum is a unity. The underlying substratum is the essential feature of the object and remains immutable. The accidental qualities which it supports are responsible for the diversity we perceive. For reasons we will consider in a moment, Hume argues that there is no justification for positing an essential underlying substratum which is responsible for the unity of an object. He claims instead that what leads us to treat bundles of diverse perceptions as unities is a strong relation among different parts. The unity of "the object" is really just a figment of the imagination. Hume holds that the imagination is apt to feign "an unknown something, or *original* substance and matter, as a principle of union or cohesion among these qualities, and as what may give the compound object a title to be call'd one thing, notwithstanding its diversity and composition" (*Treatise*, 1.4.3.5).

If the claim that material substance is a unity is a matter of fact claim, then its justification must come from experience. Hume believes that the claim relies on our idea of material substance, so that idea of a unified substance must have a corresponding impression, if it is justifiable. But, Hume holds that experience cannot provide us with any such justification because we have no impression of a unified material substance. To better comprehend why Hume believes that our idea of a unified material substance lacks justification, we need to once again examine some important features of his notions of ideas and impressions.

Hume claims that all of our impressions and ideas can be separated into those that are simple and complex. An example of a complex impression is the impression of a peach. This impression can be separated into color, taste, smell, etc. It is because I can separate this impression into several distinct impressions, that Hume considers it complex. But, he argues, there are certain impressions, like the impression of the color red, which I cannot separate into more primitive impressions. Since I cannot divide these impressions in the same way that I can with the impression of the peach, I distinguish simple from complex impressions. Hume points out that, in the same manner, our ideas can be separated into those that are simple and those that are complex. As we have seen, he claims that all of our genuinely representative ideas are derived from impressions. He holds that “[A]ll our simple ideas in their first appearance are deriv’d from simple impressions, which are correspondent to them, and which they exactly represent” (*Treatise*, 1.1.1.7). Our idea of redness, the faint image of redness that we can call to our mind even when there is no immediate impression of redness, is a simple idea. Hume claims that every simple idea has a corresponding simple impression and every simple impression has a corresponding

simple idea (*Treatise*, 1.1.1.5).¹¹ Furthermore, simple ideas, like the faint image of redness, are genuinely representative ideas. Hume holds that they exactly represent the corresponding impressions from which they are derived. One might wonder why we should believe that these simple ideas are genuinely representative. Hume provides an argument for why simple ideas must be derived from impressions, but he does not provide an argument for why simple ideas *exactly represent* simple impressions. The point seems to be that since the idea is simple and must have a corresponding simple impression (i.e., no faculty of the mind can create a simple idea without a simple impression), that idea must exactly represent the impression from which it is derived. If the idea did not genuinely represent the impression from which it is derived, then it must have changed from the original impression. But such change would involve some faculty of the mind combining it with some other idea or augmenting it or diminishing it, but then the idea would not be simple. Combination or augmentation would add to the idea making it complex while diminishing the idea would seemingly be impossible because it is simple.

At this point in the argument, Hume expresses doubts that all of our complex ideas are genuinely representative.¹² He holds that many of our complex ideas, like the idea of New Jerusalem “whose pavement is gold and walls are rubies,” have no corresponding impression (*Treatise*, 1.1.1.4). They are ideas our minds create by combining, dividing or augmenting other ideas we have. Furthermore, Hume holds that many of our complex ideas that we think

¹¹ At 1.1.1.10, Hume allows for one possible exception to this rule (the famous missing shade of blue), but I will not discuss the case here. For a detailed treatment of this issue see Cummins, pp. 548-65 or Garrett 1997, pp. 50-52.

¹² We will consider whether or not Hume believes that any complex idea is genuinely representative momentarily.

correspond to some impression are not genuinely representative. Though I may have an idea of Paris, my idea does not perfectly represent “all its streets and houses in their real and just proportions” (*Treatise*, 1.1.1.4). He thus holds that though there is a “great resemblance” between our complex impressions and ideas we cannot justifiably declare the universal rule that they are exact copies of one another (*Treatise*, 1.1.1.5).¹³

Assuming our claims concerning material substance are matter of fact claims, then the claim that material substance is a unity must be justified by an appeal to experience. Since our idea of material substance is of a unity, and since Hume equates unity with simplicity, one would expect our idea of material substance to be a simple idea. Were it a simple idea, Hume claims it would have to have a corresponding simple impression from which it is derived. But Hume argues we have no simple impression of material substance. He claims that “[t]he idea of substance...is nothing but a collection of simple ideas, that are united by the imagination, and have a particular name assign’d them...” (*Treatise*, 1.1.6.2).

We have seen that by equating simplicity with unity, Hume seems to beg the question at issue. However, we can make a stronger case for Hume’s claim that material substance is a fiction that does not rely on equating simplicity with unity. On Hume’s account, every genuinely representative idea has a corresponding impression. Perhaps one would argue that though we may not have a simple impression of substance, we do have some impression of it thereby making it a genuinely representative idea. But Hume would then ask to point to that impression. He believes that no one has done so. In other words, “material substance” is a name

¹³ We will return to this claim in the final section of this chapter.

that we assign to an idea that has no corresponding impression. Because we have no impression of material substance, we cannot justify our claims about material substance by appealing to experience. Instead, Hume claims that the unity we ascribe to objects like the peach is merely an artifact of the imagination. Rather than treating the peach as a unified object, Hume believes we should recognize that experience only provides us with a multiplicity of distinct impressions, not an underlying unity. Because Hume believes that the only way to justify claims about the unity of material substance is by pointing out its corresponding simple impression and the Aristotelians never point to an impression of material substance, he argues that the Aristotelians have no justification for positing material substance as a unifying underlying substratum.

Notice that, according to this argument, even our idea of a peach is not a genuinely representative idea. In order to be a genuinely representative idea, that idea must have a corresponding impression. Though we might think we have an impression of a peach, Hume's account entails that the impressions we attribute to the peach are actually impressions of simple ideas (color, taste, etc.). Our complex idea of the peach also includes the idea of something unified that supports and sustains the different perceivable properties. We have no perception of that which supports and sustains the properties, thus our idea is not genuinely representative. It is a fiction created by the mind.

Modern philosophy, as we have seen, turned to the notion of primary and secondary qualities to explain the apparent diversity of objects. The diversity that objects display, on this account, is merely a figment of the mind. The underlying substance is assumed to be the same; it is merely our impressions, which are caused by the substance, that provide evidence of

diversity (*Treatise*, 1.4.4.8). Recall that according to Hume's description of the account, primary qualities include "extension and solidity, with their different mixtures and modifications; figure, motion, gravity and cohesion" (*Treatise*, 1.4.4.5). These qualities are supposed to be the actual qualities possessed by the underlying substratum and the underlying substratum is supposed to account for the unity of objects. But Hume argues that we have no impression of this underlying substratum or its primary qualities. Instead, Hume argues that our ideas of primary qualities like solidity are actually complex ideas derived from our impressions of things like color, touch, smell etc. Were we to remove the secondary qualities, we would have no idea of properties like extension or solidity.

Our idea of extension, for example, is derived from our impression of objects. Hume uses the example of an impression of a table (*Treatise*, 1.2.3.4-5). When we see a table we see colored points arranged in a particular order. We realize that the color of points need not be fixed (a table can be brown, black, green, etc.), so we attempt to omit color from our idea of extension. Hume claims that we do this with other sensible qualities as well. Our sense of touch may inform our idea of extension because we feel objects as extended in space. But the shape of objects change, so we attempt to remove the sensation from our idea of extension. But, Hume argues, if we really remove all secondary qualities from our notion of extension, we are left with nothing. He argues that this is true of each supposed primary quality. If we were to remove all of the secondary qualities, there is really nothing left to our idea. Thus, Hume claims that we have no impression of primary qualities. He holds that all that we have are experiences of secondary qualities and these qualities exist only in the mind of the perceiver. If we have no

impression of primary qualities, and primary qualities are supposed to be the only real qualities that material substance displays, once again we have no impression of material substance. Thus, Hume concludes that we lack any empirical justification for our idea of material substance and therefore we cannot justify the claims we make concerning the unity of material substance. The idea of a unified substratum that possesses the different primary qualities is merely a fiction of the imagination.

Though both Aristotelians and moderns attempt to justify how we can treat diverse objects as unified, Hume argues that neither explanation is adequate. He claims that while it is natural for us to treat qualities that appear to us as “closely related” as qualities of a complex object—i.e., a single thing—if we carefully consider the situation, we will realize that we are not justified in doing so. The idea of a unified substratum is merely a fiction of the imagination.¹⁴

2. The Persistence of Material Substance¹⁵

Hume claims that we attribute persistence to material substance in an attempt to remove a difficulty that arises when we consider our ideas of particular objects and realize that these ideas are derived from distinct and successive impressions. Hume’s argument is closely tied to the discussion of unity and diversity from the last section. As we noted earlier, we often treat these successive impressions, e.g., a peach at $T_1, T_2 \dots T_5$, as impressions of a single unified object—that is, as successive stages of a, object that maintains its identity over time. Hume holds that we treat these successive impressions as a single object when we do not notice any major

¹⁴ We consider this in greater detail in section III.

¹⁵ This discussion owes a great deal to Robert McRae’s article, “The Import of Hume’s Theory of Time.”

variation in the successive moments. But, again, he contends that this is just one way to judge our experience of successive impressions. He argues that we can also consider any two distinct impressions and focus on the differences between them; doing so provides us with the idea of number or diversity. If we perceive nothing but variation in our impressions, then we are not likely to assume that the impressions are of the same object.¹⁶ Thus, when we experience successive impressions, we can treat them as impressions of a single unified object enduring through time, or we can treat them as vastly different impressions which are independent of one another; we treat the perceived object as both a unity and as possessing diversity.

In order to posit both unity and diversity of the very same object, Hume believes that our minds create a further idea, that of identity. He writes, “Here then is an idea, which is a medium betwixt unity and number; or more properly speaking, is either of them, according to the view, in which we take it” (*Treatise*, 1.4.2.29). The idea of identity allows us to treat an object as a single object maintaining unity over time and as a single object displaying diversity over time. Hume believes this idea is problematic because it involves contradictory properties. Something is either unified or diverse, it cannot be both. Furthermore, we have no impression of identity, according to Hume. Identity is merely a creation of the mind like the idea of an underlying substratum that supports and sustains perceivable qualities. Because we have no impression of identity and the idea of identity involves an implicit contradiction, it is not a genuinely representative idea; according to Hume, it is a fiction.¹⁷

¹⁶ This is Hume’s claim at 1.4.3.4. Hume’s considered claim is that even if we don’t notice a difference between impressions, we should recognize that any successive impressions are distinct and should be treated as such.

¹⁷ We consider this in greater detail in section III.

The fiction of identity plays an important role in Hume's account of material substance, so we will consider why we posit it a bit more closely. Hume asks two questions concerning our idea of identity: 1) why do we posit identity over time (and, as we will see, therefore posit material substance) when we are faced with similar successive impressions and 2) why do we posit identity over time when our impressions of a supposedly identical object or state of affairs are interrupted? In both cases, Hume argues, we are led to believe in an object's identity over time because of the way our minds work. Our minds create the illusion that objects of perception exist for more than a mere moment.

To understand how this illusion occurs, we will first examine Hume's account of why we posit identity over time when we are faced with similar successive impressions. Hume recognizes that, in some circumstances, our impression of a state of affairs at T_1 may be nearly indistinguishable from our impression of a state of affairs at T_2 , where T_1 and T_2 are successive moments. In this case, he argues, our belief in the identity of objects arises because we perceive some resemblance among the successive impressions. Hume believes that when our successive impressions share a strong resemblance with one another, the mind moves naturally from one to the next. He writes,

Nothing is more apt to make us mistake one idea for another, than any relation betwixt them, which associates them together in the imagination, and makes it pass with facility from one to the other. (*Treatise* 1.4.2.32)

Hume claims that the relation that allows the mind to move most seamlessly from one impression to another is the relation of resemblance (*Treatise*, 1.4.2.32). When two impressions share a strong resemblance, we can move from one to another without even noticing that we are

doing so. The ideas that share a strong resemblance are “very apt to be confounded” with one another (*Treatise*, 1.4.2.32). Here resemblances between the impressions lead us to treat two separate impressions as the same impression. Though, upon reflection, we may know that all of our impressions are distinct and momentary, the similarity between successive impressions directs us to treat the impressions as a single impression enduring through time. Hume claims that this is because the mind moves seamlessly through successive similar impressions to give them the appearance of enduring through successive moments. As he says, the mind “like a galley put in motion by the oars, carries on its course without any new impulse” (*Treatise*, 1.4.2.22). We treat our successive impressions as an enduring impression of an object as long as nothing jars our mind from its course (such as a drastic change in the impressions).

Hume holds that even if an object of perception noticeably changes, we are still apt to treat it as an object which endures over time as long as we discover some resemblance in the different perceptions. Though we might perceive some change in the impressions, the resemblance of one perception to another is enough to convince us that we still perceive an enduring object. Rather than judging that all we perceive is a distinct series of successive impressions, Hume argues that we judge ourselves to perceive an object. We then look to time to explain how a persisting object changes. He writes,

When we fix our thought on any object, and suppose it to continue the same for some time; 'tis evident we suppose the change to lie only in the time, and never exert ourselves to produce any new image or idea of the object. (*Treatise*, 1.4.2.33)

So on Hume’s account, whenever we are faced with similar or seemingly identical impressions, we are likely to treat those impressions as a single enduring impression of an object. When we

notice changes among our resembling impressions, we assume that what changes is time, not the object itself. In an attempt to justify our ascription of identity to these objects, we utilize the idea of material substance which supposedly ties these distinct perceptions together and remains unchanged through time.

We will consider the role of material substance in greater detail momentarily, but first we will consider why, according to Hume, we ascribe identity to objects when our impressions of those objects are interrupted. For example, why do I believe that the couch that I see when I enter my apartment is the same couch that I saw before I left the apartment? My impressions of the couch may be hours or days apart, so I cannot turn to the fluidity of successive impressions to explain my ascription of identity to the couch. Hume recognizes that in cases like these we nevertheless ascribe identity to the objects of our impressions. In these cases too, he believes that the resemblance of impressions is what leads us to our ascription of identity. He writes,

When we have been accustom'd to observe a constancy in certain impressions, and have found, that the perception of the sun or ocean, for instance, returns upon us after an absence or annihilation with like parts and in a like order, as at its first appearance, we are not apt to regard these interrupted perceptions as different, (which they really are) but on the contrary consider them as individually the same, upon account of their resemblance. (*Treatise*, 1.4.2.24)

When I return to my apartment, the color, shape, position, etc., of the couch leads me to consider it the same couch that displayed these properties earlier. Because I have repeatedly experienced similar impressions of what I judge to be the couch, I regard the objects of these impressions to be identical. Were I to return to my apartment to find a couch of a different color or shape sitting in my living room, I probably would not believe it to be the same couch as that

which was there before I left. Hume holds that this is because the two impressions do not sufficiently resemble one another.

While we treat interrupted impressions as impressions of the same object due to our repeated experience of them, we can also recognize the interrupted nature of the impressions. When my impressions are similar and uninterrupted, the objects of those impressions seem to endure through time. They seem to possess identity. But when the impressions are obviously interrupted, like an impression of the sun rising following an impression of its setting the previous day, ascribing identity to the objects of those impressions seems more challenging. Hume writes,

But as this interruption of their existence is contrary to their perfect identity, and makes us regard the first impression as annihilated, and the second as newly created, we find ourselves somewhat at a loss, and are involv'd in a kind of contradiction. In order to free ourselves from this difficulty, we disguise, as much as possible, the interruption, or rather remove it entirely, by supposing that these interrupted perceptions are connected by a real existence, of which we are insensible. This supposition, or idea of continu'd existence, acquires a force and vivacity from the memory of these broken impressions, and from the propensity, which they give us, to suppose them the same... (*Treatise*, 1.4.2.24)

Hume believes that this idea of identity is not without its problems. The idea of identity allows us to treat an object as the same continuing object through time but when we carefully consider the situation, we realize that our impressions are really changing and momentary. If our impressions are changing and momentary and objects clearly display change over time, what provides these objects with identity over time? Hume argues that we use the idea of material substance to explain the identity of changing objects. He writes, "In order to reconcile [these] contradictions the imagination is apt to feign something unknown and invisible, which it

supposes to continue the same under all these variations; and this unintelligible something it calls a *substance, or original and first matter*" (*Treatise* 1.4.3.4). He argues that instead of asserting the existence of some unintelligible underlying substratum, we should recognize that our senses are incapable of justifying the assertion that objects have continued existence. That is, we have no justification for positing the identity of objects over time (*Treatise*, 1.4.2.3). Hume's claim again stems from the assertion that our only access to the existence of objects is through sensation. We believe an object exists because of our impressions. Given this, Hume asks: how can we justifiably claim that an object continues to exist when it is not sensed? If our only access to an object is through sensation and we are not sensing an object, what justification do we have to claim that the object continues to exist?

Hume further asserts that all of our impressions are fleeting or momentary. Successive impressions may resemble one another quite closely and therefore obscure the fact that they are successive distinct impressions (*Treatise*, 1.4.2.22-24). But, he argues, upon further inspection it becomes clear that they are distinct. Given that our impressions are distinct and momentary, experience provides us with no justification for the assertion that successive impressions are impressions of the same continuing object. Hume claims that our ideas of identity and material substance, which we use to try to justify our idea of identity, are actually fictions. The impressions we perceive may be quite similar, but we cannot prove that they are impressions of the same object that persists through time. Our only perceptual access to the supposed persisting object is through distinct momentary impressions. Again, Hume claims that although

it is natural to believe that there is some underlying substratum that ensures that our successive impressions are of the same object, there is no experiential justification for doing so.

3. Substance as the Bearer of Properties and as Possessing External Existence

We have seen Hume's reasons for arguing that we are unjustified in asserting that material substance is a unity and that it persists unchanged through time, but we must still examine why he claims that we are unjustified in positing material substance as the bearer of certain properties which inhere in it. We must also examine why he rejects the assumption of the independent existence of material substance. Hume's uses one argument to call these two claims into question. The argument turns on assumptions he makes about how we conceive of impressions and ideas and how conception relates to his notion of existence.¹⁸ He claims that a proper understanding of what we mean by "existence" will demonstrate that there cannot be any difference in the type of existence of a substance and the type of existence of either "accidental" or "secondary" qualities. This proper understanding of the notion of existence will also demonstrate that there is no reason to posit an underlying substratum that sustains and supports these types of qualities.

Hume maintains that every impression is an impression of existence and every idea is an idea of existence. We do not, in his view, have a "separate and distinct" idea of existence that accompanies a perception. We do not, for example, have an impression of redness and attach to it an impression of existence. Rather, to conceive of redness is just to conceive of redness as existing. As Hume says, the idea of existence "is the very same with the idea of the perception

¹⁸ "Conception" for Hume is a broad term. It seems to include perceiving, reasoning, and judging (*Treatise* 1.3.7, footnote 20).

or object" (*Treatise*, 1.2.6.2). This is an interesting notion of existence because it makes no distinction between the supposed existence of external objects and the existence of ideas and impressions. Hume claims that nothing is ever present to our minds other than perceptions. Furthermore, he claims that the only objects that we have access to are our impressions and ideas (*Treatise*, 1.2.6.7). That is to say, we have no access to *external* objects; the only objects we have access to are mental. Further, he claims that since perceptions are the only things that can be present to the mind and since *all* of our ideas are ultimately derived from our impressions, our idea of existence must be limited to those things that are present to our mind. Hence, any quality we conceive of exists as a perception.

This notion of existence is important for our purposes because by claiming that anything that we conceive of exists, Hume argues that there is no justification for distinguishing between the type of existence of a substance (what we might call "subsistence") and the type of existence of an accident or secondary quality (an existence that depends on another entity). All of our impressions and ideas exist and they do not rely upon anything else for their existence. He writes, "Every quality being a distinct thing from another, may be conceiv'd to exist apart, *and may exist apart*, not only from every other quality, but from that unintelligible chimera of a substance" (*Treatise* 1.4.3.7, my emphasis).

Recall that one of the reasons we turn to the idea of material substances is to explain the existence of properties. According to the Aristotelians, properties exist as attributes of a substance; they depend upon material substance for their existence. According to this view, material substance possesses independent and external existence. Hume argues that if we

properly understand the notion of existence, we will recognize that there is no justification for distinguishing between subsistence and accidental existence. Since he takes *every* quality or property to exhibit independent existence, he finds no justification for positing an underlying substratum that sustains and supports the particular qualities and exists independently. That is, there is no justification for claiming that some qualities have independent existence and others do not. Likewise, the moderns claim that secondary qualities are merely mental phenomena, which are caused by primary qualities. Primary qualities are supposed to possess external existence. But if all objects are mental, then there can be no difference in the existence of primary and secondary qualities. Recall also that, according to Hume, though we may assert that primary qualities cause secondary qualities, if we carefully examine the situation, we will realize that our ideas of primary qualities actually come from our ideas of secondary qualities. Hume believes that if we were to remove all of our ideas of secondary qualities, we would have no idea of any primary quality because we have no impression of primary qualities. Hume argues that if all of our impressions are of secondary qualities and all secondary qualities possess merely internal existence, we should recognize that the only notion of existence that we have access to is that of internal existence.

Hume's discussion of existence thus provides a new argument against the idea of material substance. Material substance is supposed to exist externally; the Aristotelians and moderns treat material substance as though it is mind independent. But Hume claims that we have no justification for claiming anything is mind independent, therefore the notion of

material substance is illegitimate. So again, we lack justification for positing an underlying substratum that causes secondary qualities and exists independently.

We have considered why the matter of fact claims we make about material substance are unjustified, according to Hume. We have also considered Hume's account of why the idea of material substance itself lacks sufficient empirical justification. In doing so, we have seen that he continually refers to the idea of material substance as an idea feigned by the imagination. We have not yet considered what he means by this claim. In the next section, we will consider what he has in mind. When we consider how his notion of fiction relates to the idea of material substance, we will see that this notion of a fiction also rules out the possibility of justifying propositions about material substance through relations of ideas.

III. Hume's Account of "Fictions"¹⁹

While Hume recognizes that our idea of material substance is natural, he repeatedly insists that this idea is nothing but a fiction created by the imagination that lacks justification. But when Hume categorizes the idea of material substance as a fiction, what exactly does he mean? Does he mean that material substance is an idea that exists only in the mind? If this were what he meant, we would be faced with a problem. Given his claims about existence, it would seem strange to call the idea a fiction simply because it only exists in the mind of the perceiver. For Hume, all ideas exist only in the mind of the perceiver, so every idea would then be a fiction. But, on his account, there are genuinely representative ideas that are not fictions. To better

¹⁹ While, in this chapter, I am dealing exclusively with material substance, Hume also contends that immaterial substance is a fiction and many of his arguments concerning immaterial substance are quite similar to those that we examined in the last section. We consider Hume's argument briefly in Chapter 5. For a perspicuous account of Hume's treatment of immaterial substance, see Stroud, pp. 68-95.

understand Hume's notion of fiction, we will again consider some of his claims concerning existence.

In the last section, we saw that Hume's notion of existence makes no distinction between the existence of external objects and the existence of ideas and impressions. He argues that the idea of existence "is the very same with the idea of the perception or object," and he claims that nothing is ever present to our minds besides perceptions (*Treatise*, 1.2.6.2). He also believes that our only access to external objects is through the impressions or ideas they cause (*Treatise*, 1.2.6.7). To understand Hume's argument we must highlight two important assertions that we did not consider in the last section. First, Hume does not appear to distinguish between the existence of ideas and the existence of impressions.²⁰ Second, according to Hume, if we posit a notion of existence that is different from the existence of our perceptions—e.g., if we wish to posit a notion of existence for external objects that is not tied to our perception of them—the most we can do is hypothesize that some other type of existence is possible. But he is adamant that we cannot comprehend what this different form existence is (or justify any assertions about it) because we have no perceptual access to it (*Treatise*, 1.2.6.8-9).

One might think that Hume uses the term "fiction" to describe something that has no real world counterpart, like the idea of a centaur. However, if this were the case, then calling an idea a fiction would be akin to claiming that it is an idea of an object that lacks external existence. But as we have seen, the *only* idea of existence we have, according to Hume, is that of internal (or mental) existence. So the existence of the idea of the centaur is, in a certain respect,

²⁰ When I use the term "idea" here, I mean ideas which we can form clearly. As we will see, there are some things that Hume refers to as "ideas" that cannot exist because they cannot be clearly formed.

the same as that of an idea like a horse. Although Hume allows for the possibility that some objects may have some type of existence that the centaur lacks, he is clear that we cannot comprehend what that form of existence is because we have no perceptual access to it. So from a justificatory standpoint, the idea of a centaur is the same as the idea of a horse.

Recall that, according to Hume, one of the features that distinguishes a simple idea from a complex idea is that simple ideas are genuinely representative; they exactly or perfectly represent the simple impressions from which they are derived. The same is not true of complex ideas. Hume claims that though complex ideas may resemble the impressions from which they are derived, we cannot justify the assertion that all complex ideas genuinely represent complex impressions. Hume does not explicitly claim that *no* complex idea is genuinely representative. He claims that some complex ideas are creations of the mind, like a centaur or New Jerusalem. Others are distortions like the idea of Paris that does not properly represent all of the intricacies and proportions of the city. One might argue that Hume could distinguish between a horse and a centaur by claiming that the horse is genuinely representative, while the centaur is not. However, there are two problems with this claim. Hume's view entails that when we perceive a horse, what we actually perceive are simple impressions (color, shape, etc.) that are combined by the mind. But the idea of a horse also involves an underlying substratum that sustains and supports these qualities. We have no impression of this underlying substratum, so the idea cannot be genuinely representative. Second, even if we were to grant that the idea of the horse may be genuinely representative, what is the justification for such a claim? Why should we believe that our idea of a horse is exactly representative while our idea of the centaur is not?

Both could be created by the modification of different simple ideas. According the Humean picture, we have no justification for claiming the horse is real while the centaur is a fiction.

In his essay, “The Import of Hume’s Theory of Time”, Robert McRae points out that Hume seems to have two types of fictions which he considers throughout the *Treatise* (McRae, p. 124). The first type of fiction Hume describes is a confusion that arises from employing an idea derived from an impression “to something other than its proper object” (McRae, p. 124). The second type of fiction is “a pure invention of the imagination designed to resolve a contradiction” (McRae, p. 124). We saw an example of each type in the last section.

A centaur is a good example of a fiction in the first sense. We have simple impressions that make up our idea of a horse and simple impressions that make up our idea of a man and use these impressions to create an idea of a thing with a horse’s lower half and man’s upper half. Though this idea is derived from impressions, it represents some new object which is a fiction created by the mind. It is an object of which we have no direct impression. From a justificatory standpoint, our other complex ideas should also be considered fictions in this sense. Since we cannot demonstrate that our complex ideas genuinely represent the impressions from which they are derived, they, too, should be considered fictions.

In the last section, we saw that, according to Hume, the idea of identity is a fiction in the second sense. We have an idea of unity and an idea of diversity (or number) each of which is derived from an impression. We seek to attribute both ideas to objects to explain how they can be the same object over time when they clearly display diversity. To do so, we combine the ideas of unity and diversity to form the idea of identity. We form the idea of something the

remains a unified thing over time even though it undergoes change. The idea of identity is somewhat different from the idea of a centaur. There does not seem to be anything contradictory about the existence of a being with the body of a horse and the head of a man. Hume believes that the idea of identity involves a contradiction. Because the idea of identity involves the combination of two opposites (unity and diversity) it leads to a contradiction.

As we saw in the last section, Hume believes that we turn to the idea of material substance in an attempt to remove contradictions that arise from our idea of identity. Material substance is another example of the second kind of fiction we find in the *Treatise*. These fictions are not merely confusions that arise because we misapply an idea derived from an impression and mistakenly represent a new object. Instead, this type of fiction is, as McRae says, “a pure invention of the imagination designed to resolve a contradiction” (p. 124). Our idea of identity involves something that both remains the same and changes over time. To explain how this could be possible, Hume claims that “the imagination is apt to feign something unknown and invisible, which it supposes to continue the same under all the variations; and this unintelligible something it calls a substance...” (*Treatise*, 1.4.3.4).

Throughout this chapter, we have considered why Hume believes that we cannot provide matter of fact justification for our propositions concerning material substance. Given that fictions like material substance are created by the mind to resolve a contradiction, we might think that we should turn to relations of ideas to justify these propositions. Recall that the opposite of a proposition asserting a relation of ideas is a contradiction. According to Hume, the proposition “three times five is equal to the half of thirty” asserts a relation of ideas because the

proposition “three times five is not equal to the half of thirty” leads to a contradiction. One might believe that a proposition like “there is an underlying substratum that remains the same through all change” is likewise an assertion of a relation of ideas because if it is not true, then we are faced with a contradiction. However, Hume believes that this solution would be unfruitful. He holds that the contradiction that we use material substance to resolve only arises because we first posit the fiction of identity. If we did not posit this first kind of fiction, we would not need to posit the idea of material substance. Furthermore, Hume does not believe that material substance actually solves the contradiction created when we posit the idea of identity. The idea of material substance itself is contradictory; that is, it is impossible to form a clear idea of material substance.

While it is true that the idea of material substance lacks empirical justification because it has no corresponding impression from which it is derived, it is also an idea that, understood properly, cannot exist. It is different from complex ideas like that of a horse or centaur because I can form a clear idea of a horse or centaur. Hume holds that we cannot form clear ideas of the fictions we employ to solve contradictions. Thus on his view, I cannot form a clear idea of material substance. He holds that if we properly think through the idea of material substance, we will realize that it too involves a contradiction. As one scholar notes, the idea of material substance is unintelligible in the sense that it, “requires us to have an idea of something, of which no idea can be formed” (Stroud, p. 120).²¹ If it actually possessed all of the properties that are needed to remove the contradiction created by our idea of identity, it would possess

²¹ Stroud makes this point while referring to immaterial substance, but I believe the same is true of material substance.

contradictory properties. This is what Hume means when he refers to the fiction of material substance as something that is unintelligible (*Treatise* 1.4.3.4).

Thus in the *Treatise*, Hume seeks to highlight two important features of our idea of material substance. First, he tries to rule out the possibility of justifying claims about material substance. Second, he seeks to show that the idea itself is inherently problematic; it has no corresponding impression and the idea itself is actually unintelligible in the sense that when we carefully consider what is necessary for our idea of material substance, we will see that it involves a contradiction.

Before we examine why material substance must possess contradictory properties, we should note that there is an obvious problem with the assertion that material substance is an idea which cannot be formed. In the *Treatise*, Hume argues that our imagination will not allow us to construct ideas with contradictory properties. His example is a mountain without a valley (*Treatise*, 1.2.2.8). We cannot have an idea of a mountain without a valley. According to Hume, such a thing is conceptually impossible. Yet he calls the *idea* of material substance a fiction. Furthermore, we have considered several components which are supposed to belong to our idea of substance. Though Hume argues that we are unjustified in a notion of substance composed of these ideas, he nevertheless refers to material substance as an idea. He does so, I suspect, because he is engaging with philosophers before him who referred to material substance as an idea. His view is that, if philosophers clearly understood what their supposed idea of material substance entailed, they would realize that the idea of material substance has a great deal in common with a mountain without a valley—both “ideas” are unintelligible.

To understand why Hume claims that the idea of material substance involves a contradiction, we will first focus on the claim that material substance is supposed to be a unity which displays simplicity. Material substance is supposed to be that which provides unity to perceptual objects. If it is to provide unity, Hume believes it must be simple (indivisible). As we have noted, Hume's claim here seems quite tendentious and it is doubtful that a proponent of the idea of material substance would accept that unity equates to simplicity. Nevertheless, he holds that were we to have an impression of material substance, it would be an impression of a simple object that sustains and supports different qualities that make up our objects of perception. For Hume, this would mean having an impression of something that is both simple and complex at the same time. Likewise, an idea of material substance would be an idea of something simple and complex at the same time. Because an impression or idea of material substance as a unity would have to display contradictory properties, we cannot really form any idea of it. We can discuss the properties it is supposed to possess individually and form ideas of each of these, i.e., that it is unified and that it brings rise to different properties. But we cannot form an idea of such a thing possessing both properties at the same time. Likewise, we may form an idea of a mountain and we may form an idea of something without a valley (flat land, for instance). But we cannot form an idea of a mountain without a valley.

We can give a similar account of the notion of material substance as that which persists. On this account, material substance supposedly maintains its unity while its accidental qualities change over time. Hume believes that if we carefully consider these features of material substance, we will grasp the contradiction at hand. We are positing something that displays

unity and diversity at the same time. While we can talk of something that displays both unity and diversity at the same time and even invent the concept of identity to help explain how such a thing is possible, we cannot form an idea of such a thing. To do so would be to conceive of something that is, at the same time, both the same and different.

As we noted above, when Hume concludes that the idea material substance is a fiction, he is asserting two important claims. First, material substance lacks empirical justification. It has no corresponding impression; it is merely an idea created by the mind to solve a seeming contradiction. Second, considered as an idea, material substance is unintelligible. Each supposedly essential feature of material substance lacks empirical justification and two of its features involve contradictions. The other two features, i.e. that it is the bearer of properties and possesses external existence, are shown to be unnecessary once we properly understand existence. Thus, on Hume's account, material substance is not an idea at all. It is, instead, a mere confusion to which we have assigned the name "material substance." Once this supposed idea is properly explicated, Hume believes we will understand its contradictory nature and recognize its impossibility.

Chapter 2: Setting the Stage for Kant's Response to Hume

In the last chapter, we saw that Hume attempts to show that the idea of material substance is a fiction of the imagination. Hume's argument involves two major claims. First he contends that the idea of material substance lacks justification. For Hume, we must be able to point to the impression from which an idea is derived. If we cannot, then the idea lacks justification. He argues that we cannot point to an impression from which the idea is derived. Neither sensation nor reflection provides us with an impression of it. Next, he claims the idea itself is unintelligible. If we properly examine our idea of material substance, Hume argues that we will realize that two of the properties we attribute to material substance are, in fact, contradictory properties. Thus no clear idea of it that includes these properties could ever be formed.

In this chapter, we will begin to explicate Kant's response to Hume. We begin by setting the stage for Kant's proof of the principle of persistence. According to Kant, this principle states that "In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature" (*CPR*, B 224). Kant provides the proof of the principle of persistence in the First Analogy. It is important to note that Kant's proof of the principle of persistence concerns substance in general (as opposed to material substance). Thus the First Analogy is not by itself a response to Hume's skeptical claims about material substance. But Kant uses the results of the First Analogy to show why positing the concept of material substance is necessary for experience. Thus understanding the proof of the principle of persistence is integral to our project. Kant, in contrast to Hume, argues that certain concepts must precede experience, i.e.,

they must be *a priori* concepts, in order for experience to be possible.²² The concept of causality (which Hume famously calls into question) is one such concept and the concept of material substance is another. We start this chapter by considering Hume's critique of causal judgments and the concept of causality. While a detailed account of Hume's critique would take us far afield, we will briefly outline his argument in section A.

There are a few reasons why considering Hume's remarks on causality are important for our purposes. First, many of Kant's remarks concerning these necessary *a priori* concepts and how they relate to Humean skepticism focus, for the most part, on the concept causality. So an understanding of Hume's critique of the concept of causality will aid in a general understanding of why Kant believes we must posit certain *a priori* concepts. Second, and more importantly, we will see that, according to Kant, Hume's skepticism concerning the concept of substance in general turns crucially on his treatment of causality. Kant holds that Hume's skepticism toward many of the concepts that we consider *a priori* start with his treatment of the concept of causality (*Prolegomena*, 4:257-258). Hume's treatment of the concept of causality left the science of metaphysics (the science which also governs the concepts of substance in general

²² Notice that we have moved from a discussion of Hume and *ideas* to Kant and *concepts*. Kant is careful to distinguish between concepts and ideas. A concept, for Kant, is a species of cognition whereas an idea is a pure concept, "which goes beyond the possibility of experience." (A 320/B 377) While Kant's distinction is certainly interesting, we will not pursue it any further because it has little bearing on our project. What is important for our purposes is that while Kant separates concepts from ideas, Hume does not. Hume uses the term idea much more broadly. For Hume, material substance and causality are complex ideas. Kant certainly had enough access to Hume's works to recognize that Hume uses "idea" rather than concept in describing material substance and causality, yet he contrasts his notion of material substance with Hume's. Thus while we must be careful not to confuse Kant's notion of ideas with Hume's, we are justified in comparing Hume's notion of the idea of material substance with Kant's notion of the concept of material substance.

and causality) in desperate need of reform (*Prolegomena*, 4:258). Kant believes that by seriously considering Hume's critique of causality, he can reform metaphysics and provide an *a priori* justification for many of the concepts that Hume dubbed fictions.

Kant argues that starting with an examination of the concept of causality, Hume made an important mistake which permeates the rest of his skepticism: Hume did not recognize certain concepts are *a priori* and that from these concepts a class of *a priori* (and thus necessary) judgments arise. Kant thus argues that some judgments that Hume considers contingent—judgments such as “everything that happens has its cause”—actually hold with necessity. Kant specifically ties Hume's critique of the concept causality to Hume's critique of the concept of substance in general. Kant calls attention to an important similarity between judgments arising from the two concepts in a section of the *CPR* entitled the, “Doctrine of Method.” As we might expect given that he argues that both concepts are *a priori*, Kant indicates that judgments arising from the concept of substance (such as the principle of persistence) are on similar epistemic ground as those that arise from the concept of causality; they can and should be justified in the same manner. He writes,

The skeptical aberrations of this otherwise extremely acute man [i.e., Hume] arose primarily from a failing that he had in common with all dogmatists, namely, that he did not systemically survey all the kinds of *a priori* synthesis of the understanding. For had he done so, he would have found, not to mention any others here, that e.g., the principle of persistence is one that anticipates experience just as much as that of causality. (*CPR*, A 767/B 795)²³

While this passage needs further explication, it is clear from the outset that Kant believes that Hume's skepticism misses something important. Had he systematically

²³ We will consider this quotation in greater detail in chapter 3.

surveyed “all the kinds of *a priori* synthesis of the understanding,” Hume would have realized that the justification for both the principle of persistence (a judgment arising from our concept of substance in general) and the principle of causality (a judgment arising from our concept of causality) comes from the fact that both principles rely on concepts that “anticipate” (or are necessary for) our form of experience. We will see that while Kant ultimately disagrees with Hume’s skeptical conclusions, he finds several of Hume’s arguments important.

In the *Prolegomena*, Kant notes the Hume’s opponents completely missed the point of his critique of causality as well as his “hints for improvement” (4:258-4:259). It is important to understand Hume’s critique of causality and his hints for improvement because they motivated Kant to seek an alternative explanation to Hume’s skeptical conclusions. Once we understand Hume’s critique of causality and how, according to Kant, this critique led to Hume’s skepticism concerning the idea of material substance (in section II) we will consider what it means to say certain *a priori* concepts are necessary for experience. We will examine the class of judgments which supposedly arise from our *a priori* concepts. Kant refers to these judgments as “*a priori* synthetic” judgments. Thus, we will consider some of the important features of Kant’s analytic/synthetic distinction. We will consider how this distinction relates to Hume’s matters of fact/relations of ideas distinction. More specifically, we consider what features of Hume’s distinction Kant accepts, what features he rejects, and why he thinks that Hume’s classification does not adequately account for every class of judgment.

I. Hume and Causality

We now turn to some of Kant's remarks concerning Hume on the concept of causality in an attempt to better understand what aspects of the Humean picture Kant accepts. Using the following quote as a guide for Kant's understanding of Hume's position, we will examine Hume's critique of causality. In the *Prolegomena*, Kant writes,

Hume started mainly from a single but important concept in metaphysics, namely, that of the *connection of cause and effect* (and of course also its derivative concepts, of force and action, etc.), and called upon reason, which pretends to have generated this concept in her womb, to give him an account of by what right she thinks: that something could be so constituted that, if it is posited, something else must necessarily thereby be posited as well; for that is what the concept of cause says. He indisputably proved that it is wholly impossible for reason to think such a connection *a priori* and from concepts, because this connection contains necessity; and it is simply not to be seen how it could be, that because something is, something else must necessarily also be, and therefore how the concept of such a connection could be introduced *a priori*. From this he concluded that reason completely and fully deceives herself with this concept, falsely taking it for her own child, when it is really nothing but a bastard of the imagination, which, impregnated by experience, and having brought certain representations under the law of association, passes off the resulting subjective necessity (i.e., habit) for an objective necessity (from insight). From which he concluded that reason has no power at all to think such connections, not even merely in general, because its concepts would then be bare fictions, and all of its cognitions allegedly established *a priori* would be nothing but falsely marked ordinary experiences... (4:257-4:258)

Here Kant considers Hume's claims concerning why the concept of causality lacks justification. In order to understand the quote and how it relates to Kant's proof of the First Analogy, we will briefly outline Hume's argument concerning our lack of justification for our idea of causality.

Hume uses two related but importantly different arguments to attack the idea of causality. First, he shows that our causal judgments lack justification. Next, he demonstrates that, like the idea of material substance, the idea of causality itself is a fiction. Our explication will therefore be broken into two sections. First, we will consider Hume's argument for why our matter of fact judgments lack justification.²⁴ This is important for our purposes because Kant believes that many of the judgments Hume classifies as contingent matters of fact (that lack justification) are actually necessary. Understanding these judgments and Kant's account of how they arise is important for our purposes because Kant claims that the principle of persistence, which is the subject of the First Analogy, is one such judgment. Next, we will consider why Hume argues that the *idea* of causality is a fiction. His argument is quite similar to his the argument he uses against the idea of material substance. By understanding Hume's argument and Kant's strategy for refutation, we will be in a better position to understand how Kant will argue that the concept of material substance is necessary. As we consider Hume's arguments, we will return to the above quote from the *Prolegomena* to better understand the force of Kant's response.²⁵

A. Hume and the Justification of Matter of Fact Judgments

In general terms, Hume's critique calls into question our attempt to justify inductive claims. As we have seen, Hume distinguishes between two sorts of judgments: matters of fact and relations of ideas. In the last chapter we considered a few important features of matter of fact

²⁴Our discussion will focus on Hume's presentation of the argument in *An Enquiry Concerning Human Understanding* sections 1.4.1.1-1.4.2.23 as it seems to be his clearest presentation of the argument. For Hume's treatment of the issue in the *Treatise*, see 1.3.14.1-1.3.15.12.

²⁵This will be a very brief overview. For an in depth discussion of Hume's skepticism concerning induction, see: Beauchamp et al.; Garrett 1997, pp. 76-117; Stroud, pp. 42-95; Owen, pp. 113-146.

judgments. They are *a posteriori* claims (claims founded upon experience), and the opposite of a matter of fact judgment, Hume argues, does not lead to a contradiction. We must now consider a further feature of Hume's matters of fact. Hume writes, "All reasonings concerning matter of fact seem to be founded on the relation of cause and effect" (*EHU*, 4.1.4). Hume believes that matters of fact are founded upon the relation of cause and effect because all matter of fact judgments, on Hume's account, are inductive; i.e., they possess predictive import. They are claims about what will (likely) happen in the future.²⁶ As such, he argues, they are integrally tied to our idea of causality. They are founded on the relation of cause and effect in that the relation of cause and effect alone allows us "to go beyond the evidence of our memory and senses" (*EHU*, 4.1.4).

Let us consider this claim in greater detail by turning to one of Hume's examples of a matter of fact judgment: bread nourishes humans (*EHU*, 4.1.7). First, it is clear that this is an inductive judgment with predictive import—it claims that in the future, should a human eat bread, that human will (likely) be nourished by it. The judgment is founded upon the relation of cause and effect in that it assumes that bread possesses certain properties which cause nourishment to humans.

²⁶ One might wonder where this leaves judgments concerning current experience. How, on Hume's view, should we classify judgments that merely report our observations? For example, how should we classify the judgment "*This* snow is white." The judgment possesses no predictive import, but the contrary of it does not lead to a contradiction. Hume does not classify such judgments as matters of fact, nor as relations of ideas. Instead, he denies that such observations are objects of human reason. He claims that they are perceptions. These perceptions differ from objects of human reason because in the case of perceptions, there is no "exercise of thought, or any action, properly speaking, but a mere passive admission of the impressions thro' the organs of sensation" (*Treatise*, 1.3.2.1).

Before we consider Hume's examination of our justification of cause and effect, we now turn to his account of how we are led to make inductive judgments. Hume claims that inductive judgments arise because we witness the constant conjunction of two events. The judgment "bread nourishes humans" arises because we compile evidence of repeated instances of humans eating bread and that bread sustaining them. Hume argues that if we witness the constant conjunction of two events often enough we will begin to assume that these events will continue to be conjoined in the future. Hume writes, "If a body of like colour and consistence with that bread, which we have formerly eat, be presented to us, we make no scruple of repeating the experiment, and foresee, with certainty, like nourishment and support" (*EHU*, 4.2.16). In other words, we will begin to assume a causal relationship between ingesting bread and feeling nourished. Hume believes that all matter of fact judgments share this characteristic; they arise because we witness the constant conjunction of two events and we begin to assume a casual relation between similar events. So, he argues if we seek to *justify* our matter of fact judgments, "[w]e must ask what is the foundation of all our reasonings and conclusions concerning [the relation of cause and effect]" (*EHU*, 4.2.14).

Hume considers two possibilities, which he believes are exhaustive, for justifying our judgments involving causality: we must either use demonstrative reasoning or moral reasoning (*EHU*, 4.2.18). Demonstrative reasoning is reasoning that can be demonstrated with certainty using the principle of contradiction. Demonstrative reasoning utilizes *a priori* proofs (like those in logic and pure mathematics) for justification. Moral reasoning, here, is equivalent to probable reasoning. It is reasoning that concerns the likelihood of something happening. It relies upon *a*

posteriori claims for its justification. In Hume's terminology, demonstrative reasoning is ultimately founded upon reason itself, while moral reasoning is founded upon experience.

Hume argues that we cannot justify judgments involving causality by using demonstrative reasoning. When we consider such a judgment, he holds, it is apparent that the contrary of these propositions would not lead to a contradiction (e.g., it is possible to conceive of bread not nourishing humans). So, he rules out the possibility that we could use reason alone to derive an effect from a cause.²⁷ He writes, "The mind can never possibly find the effect in the supposed cause, by the most accurate scrutiny and examination. For the effect is totally different from the cause, and consequently can never be discovered in it" (*EHU*, 4.1.9). Hume provides a helpful example to clarify and justify his position. He writes,

When I see, for instance, a Billiard-ball moving in a straight line towards another; even suppose motion in the second ball should by accident be suggested to me, as the result of their contact or impulse; may I not conceive, that a hundred different events might as well follow that cause? May not both these balls remain at absolute rest? May not the first ball return in a straight line, or leap off from the second in any line or direction? All these suppositions are consistent and conceivable. Why then should we give the preference to one, which is no more consistent or conceivable than the rest? All our reasonings *a priori* will never be able to show us any foundation for this preference. (*EHU*, 4.1.30)

Hume's point, of course, is that without experience, we would have no matter of fact judgments. Without experience, we would be unable to determine the effect of the contact between the moving and stationary ball. Were we to consider the matter entirely *a priori*,

²⁷ Kant will argue that the concept of causality is an *a priori* concept. We will consider this claim in much greater detail in the next section, but for now, let us grant Hume that it is a matter of fact in order to understand his critique.

without any appeal to experience, there is nothing that would tell us what the balls would do. No logical or conceptual contradiction would result if the balls were to simply stop moving or if they were to fly off in any number of directions. Our ideas of movement, mass, the conservation of energy, etc., are all taken from our experience of the world. It is only because we have experience of how objects react in the physical world that we believe we have some justification for predicting the effect of the billiard balls. Hume argues that *any* conclusions we draw concerning matters of fact rely on an appeal to experience. Thus demonstrative reasoning will not suffice.

Hume's insistence that experience is necessary for matter of fact judgments is what Kant refers to in the *Prolegomena* quote when he writes,

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

Hume believes that if we grant that all judgments involving causality rely on experience for their evidence, then we must turn to moral (or probable) reasoning when seeking to justify these judgments. He argues that if we must turn to moral reasoning, then, our supposed justification will be extremely problematic. To better understand why this is, let us return to the matter of fact judgment, "bread nourishes humans."

As we have seen, Hume argues that we say that bread nourishes humans because in the past we have witnessed the constant conjunction of humans ingesting bread and bread

sustaining humans. When we are asked to provide justification for the judgment, Hume argues that we cite past instances in which bread nourished humans. But, he asks, why should we believe that because bread has nourished humans in the past it will likely continue to do so in the future? What justification do we have for the claim that since event X has always preceded event Y in the past, event X will likely continue to precede event Y in the future?

Hume argues that any attempt at justification relies upon assuming the uniformity of nature. That is, it relies on assuming what has happened in the past (e.g., the sun rising, the laws of gravity holding, bread nourishing humans, etc.) will likely continue to occur in the future. But what is our justification for assuming the uniformity of nature? He argues that again, we cannot turn to demonstrative reasoning for our justification. It is certainly conceivable that the laws of nature could change (the sun could not rise, the laws of gravity could change, bread could no longer nourish humans). Thus we must consider whether moral (or probable) reasoning can provide the needed justification.

Once again, we turn to citing past instances in which nature has remained uniform to try to justify our claim that nature will likely remain uniform. But, Hume points out, if this is our strategy, then our supposed justification for positing the uniformity of nature rests upon an inductive claim (specifically, the claim that since nature has been uniform in the past, it will continue to be uniform in the future). Thus, we end up assuming induction in order to justify induction. Hume draws attention to this circular reasoning when he writes, "It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future; since all these arguments are founded on the supposition of that resemblance" (*EHU*,

4.2.21). He claims that such circular justification is no justification at all. All attempts at justifying matter of fact judgments merely beg the question.²⁸

Hume also provides an account of why we believe so strongly in matter of fact judgments. We have already hinted at Hume's explanation, but we will now consider it in a bit more detail. We have seen that Hume argues that our matter of fact judgments arise from our experience of constant conjunction. Custom or habit, in other words, explains why we believe so strongly in our matter of fact judgments (*EHU*, 5.1.5). The constant conjunction of two events in the past leads us to believe that these events will continue to be conjoined in the future because we are creatures of habit. The more experience I have of this conjunction, the stronger my belief will be. If I witness the conjunction of two events a handful of times, say, going to the store at several different times without ever checking its hours of operation and the store being open each time, I might assume that the store will be open whenever I go. Were I to go and find it closed, I might be somewhat surprised but it would not shake the core of my beliefs. I would recognize that my going to the store and it being open was a matter of coincidence. However, were the laws of gravity to radically change, I would likely call many of my other beliefs into question. My experience of the laws of gravity holding is so overwhelming, that a change in these laws would likely lead me to question other "less certain" matters of fact. Hume considers the role of custom or habit in forming out beliefs a "universally acknowledged" principle of

²⁸ He does not however believe that we should stop using induction. His point is that we lack justification for our inductive claims, not that induction is worthless.

human nature (*EHU*, 5.1.5). Habit, on this picture, can lead us to believe in something quite strongly and can obscure the fact that we lack any proper justification for that belief.

B. Hume and the concept of a necessary connection

We now have an account of why Hume calls our supposed justification for matter of fact judgments into question as well as a description of why we make those judgments. Notice that up to this point, he has shown that matter of fact judgments lack justification because they are based on constant conjunction, not causation. This leaves open the possibility that if we properly understood and applied the idea of causality, we might still be able to justify causal claims.²⁹ Hume, however, seeks to show that this kind of justification is hopeless as well. After demonstrating that we have no justification for our matter of fact judgments, he provides another argument in an attempt to show that the idea of causality itself lacks justification. That is, he attempts to show not only that our judgments involving the idea of causality lack justification, but also that the idea itself, which is often taken as an *a priori* truth of metaphysics, is completely unjustified. In his terms, Hume questions the origin of our idea of a causal or “necessary connection.” He writes, “There are no ideas, which occur in metaphysics, more obscure and uncertain, than those of *power, force, energy, or necessary connection...*” (*EHU*, 7.1.3). This is particularly important for our purposes because Kant will argue that the concept of

²⁹ This is, in a sense, what Kant will argue. He will attempt to show that if our concept of causality is limited to mere constant conjunction, our causal judgments will forever lack justification. However, once we properly understand the concept of causality, and the necessary role it plays in our experience, we will see that we have justification for causal judgments.

causality, like the concept of material substance is a necessary concept for our form of experience.

Hume's examination of the idea of causal connection takes a familiar form. He first reminds his reader of his claim that all ideas are merely copies of impressions (*EHU*, 7.1.4). He also claims that "where we cannot find any impression, we may be certain that there is no idea" (*EHU*, 7.2.30). Given this, he will consider the only two types of justification he deems possible. First, he will examine whether the idea can be justified through sensation, then he will consider whether we can justify it through reflection (i.e., can we derive the idea "from reflection on the operations of our minds") (*EHU*, 7.1.9). After supposedly ruling out both possibilities, he will claim that the concept is merely a fiction.

Hume's discussion of how we can be sure that we have no sensation of a necessary connection closely mirrors his discussion of why matter of fact claims lack justification. To demonstrate that we have no sensation of a necessary connection, Hume asks the reader to consider the external objects from which our concept of a necessary connection arises. He again turns to the example of the billiard balls (*EHU*, 7.1.6).³⁰ He notes that any time we witness one billiard ball collide with a second and the second moving, we do not thereby observe any necessary connection. All that we witness is an instance of one ball hitting another and the other moving. We witness that the second ball does move after being struck by the first, but we do not

³⁰ The description "external object" is Hume's. We have seen that Hume does not believe we have justification for positing "external" existence. Thus on his view, we have no justification for positing the existence of external objects. When he uses the description here, he is pointing to those objects which we take to be external.

witness anything ensuring that motion must be transferred to the second ball in the future. As he writes, we do not observe,

any quality, which binds the effect to the cause, and renders the one an infallible consequences of the other. We only find, that the one does actually, in fact, follow the other...Consequently, there is not, in any single, particular instance of cause and effect, any thing which can suggest the idea of power or necessary connection (*EHU*, 7.1.6).

As one might expect, Hume highlights that we cannot derive the concept of a necessary connection (tying a cause to its effect) from witnessing a single instance of the conjunction of two events because he will eventually claim that the idea is a creation of the imagination. It arises not from an impression of a necessary connection, but from witnessing several instances of constant conjunction (*EHU*, 7.2.28).³¹ Thus he believes he has shown that the idea of a necessary connection (and therefore that of a causal connection) cannot come from sensation alone.

To show that we cannot justify the concept of a necessary connection by reflecting on the operations of our own minds, Hume examines the phenomenon of volition. He notes that one might initially believe that we derive the idea of a necessary connection by examining the causal powers of the mind. The mind appears to have some causal control over our bodies. For example, one might argue that we have an impression of necessary connection because we feel that “by the simple command of our will, we can move the organs of our body, or direct the

³¹ We will consider this claim in greater detail momentarily.

faculties of our mind" (*EHU*, 7.1.9).³² When examining whether or not we can derive an impression of a necessary connection through reflecting on our volition, Hume provides three brief arguments.³³ These arguments are supposed to show that we cannot derive the idea of a necessary connection by any amount of reflection.

One might think that because I am able to move my fingers over my keyboard because I want to type this sentence, there must be some necessary connection between my desire to type the sentence and my body fulfilling that desire. If I carefully reflect upon what is going on when I type the sentence, perhaps I will discover an impression of a necessary connection. Hume believes such a discovery is implausible for several reasons. First, he argues that there is no "principle in all of nature more mysterious than the union of soul with body" (*EHU*, 7.1.11). This is important, according to Hume, because if we attempt to justify the notion of a necessary connection by appealing to the mind's power over the body, we should, at the very least, be able to explain what the mind is and how it is connected to the body. Hume argues that no one has given us a sufficient account of mind and body and until someone does, it will not be fruitful to look to the mind's connection with the body. Those who would point to the connection of mind and body as justification for a necessary connection are merely using one

³²To obtain a general idea of how Hume rules out the possibility of deriving the idea of a necessary connection through reflection, we will consider the first of these two arguments, i.e., that we might be able to derive an impression of a necessary connection by reflecting on the ability of the mind to move the body. To save time and space, we will leave his further argument aside, i.e., that we that we might be able to derive an impression of a necessary connection by reflecting on the ability of the mind to create ideas. The important point for our purposes is to recognize that Hume attempts to rule out the possibility that these ideas could be derived from sensation or reflection.

³³ The arguments can be found in *EHU* from 7.1.11-7.1.14.

obscure phenomenon to justify another. Hume concludes that if we cannot provide any clear explanation of how the mind is connected to the body, then we cannot show that this connection follows with necessity.

Next, Hume attempts to show that we do not even have good reason to think that we could find an impression of a necessary connection by looking to the connection between mind and body. He considers the fact that our minds do not have complete power over our bodies. For example, while I may be able to move my fingers at will, I cannot exert the same control over my liver (*EHU*, 7.1.12). Thus the connection between volition and the body is more limited than we first assumed. Hume argues that this limitation shows our understanding of the relationship between mind and body comes from experience; it does not come from reflection. He claims that we discover the limitations of the mind's control over the body by experimentation. We try to move different parts of our bodies in order to discover what aspects we have control over. We do not know this via mental reflection. To help support this claim he considers phantom limb syndrome (*EHU*, 7.1.13). Individuals who have recently lost limbs will often try to move those limbs. Hume argues that they do so because they are used to moving those limbs. He appears to argue that were there some necessary connection between mind and body, then that connection would be severed once the limb was lost. That connection gone, individuals would not attempt to move those missing limbs. But they do attempt to move their missing limbs and this can easily be explained if our knowledge of the connection between mind and body comes from experience and not reflection. Thus, Hume believes that cases like phantom limbs show that experience has taught us that we have some "power" over our limbs.

We have already seen that experience cannot provide us with an impression of a necessary connection because “experience only teaches us, how one event constantly follows another; without instructing us in the secret connexion, which binds them together and renders them inseparable” (*EHU*, 7.1.13). If we were to have an impression of the supposed necessary connection between mind and body obtained through reflection, he argues that we would know both why the mind only has control over certain parts of the body and the limits of the minds’ control without having to appeal to experience.

Hume’s final argument attempts to clearly demonstrate that the connection between mind and body is “mysterious and unintelligible” and cannot serve as justification for an impression of a necessary connection (*EHU*, 7.1.14). He points out that when our minds exert power over our bodies, what we “feel” seems to be at odds with what actually occurs. For example, from our knowledge of human anatomy, we know that when I will to move my finger what actually occurs is that different muscles, nerves, bones, “and perhaps something still more minute and unknown, through which the motion is successively propagated, ere it to reach the member itself whose motion is the immediate object of the volition” (*EHU*, 7.1.14). So while I may just seek to move my finger and I may only feel the movement of the finger (the immediate object of volition), several other parts of the body must move (often without my knowledge that they are doing so) in order to accomplish this task. This discrepancy, according to Hume, provides “certain proof” that the power of our minds over our bodies is “mysterious and unintelligible” (*EHU*, 7.1.14).

Anatomy tells us that when we will an event to occur, what actually occurs is “another event, unknown to ourselves, and totally different from the one intended, is produced: This event produces another, equally unknown: Till at last, through a long succession, the desired event is produced” (*EHU*, 7.1.14). Hume believes that if we could really reflect upon the “power” that allows us to move a desired limb, then we should immediately know the full effects of that power. We clearly do not know the full effects by reflection. The effects are discovered through experimentation by anatomists.

Given these three arguments, Hume believes that he has clearly demonstrated that our understanding of the “power” that connects our minds and bodies is not copied from reflection. Instead, it is derived from experience.

Because he believes that our idea of a causal connection cannot be derived either from a sensation or reflection, Hume argues that it is just another fiction created by the imagination. Neither sensation nor reflection provides us with access to the “tie” that binds a cause to an effect. As Hume puts the point, “They seem *conjoined*, but never *connected*” (*EHU*, 7.2.26). Our idea of cause and effect is really just an idea of constant conjunction. We have no idea of a necessary connection or a power that binds a cause to an effect. He claims that “necessary connection” and “power”, here, are words “absolutely without meaning” (*EHU*, 7.2.26). Thus, as in the case of the concept of material substance, Hume argues that the concept of causality is merely a fiction.

II. Kant and Causality

We now turn to Kant's response to Hume. Again, we will break our discussion into two sections. In section A, we will highlight the features of Hume's critique of causality that Kant accepts and the features he rejects. In doing so, we will lay a foundation for understanding Kant's claim that certain concepts (like those of causality and substance in general) are necessary for our form of experience. We will also consider his claim that certain judgments arise from these concepts and thus follow with necessity. In section B, we will examine Kant's analytic/synthetic distinction more closely. This distinction is important for our purposes because Kant claims that certain judgments involving the concepts of causality and substance in general are synthetic *a priori* judgments. This is a class of judgments that Hume missed. Kant believes that a proper understanding of these judgments will allow us to justify certain matter of fact claims, like the principle of persistence.

A. An Outline of Kant's Response to Hume on Causality

Kant agrees with many features that Hume attributes to matter of fact judgments. He believes that Hume is correct to identify matter of fact judgments with causal judgments, and he holds that experience plays an important role in our formation of causal judgments. He believes that Hume is also correct to point out that the relation of cause and effect could never be justified by appealing to experience because the relation would then be contingent. Furthermore, he agrees that the relation of cause and effect cannot be demonstrated using reason alone. Kant claims that Hume's critique of causality destroyed traditional metaphysics and left the science of

metaphysics in desperate need of reform. Understanding how Hume destroyed metaphysics and how Kant seeks to reform metaphysics will set the stage for Kant's proof of the First Analogy. We will break this section into two parts. First, we will examine why Kant found Hume's critique of causality so important. Next, we will consider Kant's general strategy for reforming metaphysics and how his strategy relates to the concept of material substance.

1. Why Metaphysics was in Need of Reform

As we have seen, Hume argues that though we think many of our causal judgments are justifiable, when we consider the matter closely, we will realize that any attempt at justification with reference to experience merely begs the question. Experience coupled with habit or custom leads us to posit that a supposed cause is tied to its supposed effect. But we have no means of demonstrating that an effect will follow from a cause. Though we may speak of a necessary connection tying a cause to an effect, we have no real idea of this necessary connection because we have no impression of it. Nevertheless, when we think that event A causes event B, we smuggle in the idea of a necessary connection. Hume believes that the most we can say is that up to now every time event A occurs, B also occurs. We cannot make the further claim that if A occurs in the future, B will necessarily or even probably follow. Kant believes that Hume's argument was a proper challenge to the metaphysicians of his day.

To better understand this, let us turn to the final lines of the *Prolegomena* quote. Kant writes that Hume,

concluded that reason has no power at all to think such connections, not even merely in general, because its concepts would then be bare fictions, and all of its

cognitions allegedly established *a priori* would be nothing but falsely marked ordinary experiences... (4:257-4:258)

The “connections” about which reason has no power to think are the connections of cause and effect. As we saw with the billiard-ball example, the idea of a cause leading to an effect is not a relation of ideas. Reason alone gives us no justification to believe a particular effect will follow a particular cause. The “ordinary experiences” to which Kant refers at the end of the quote are the experiences of constant conjunction. Here Kant recognizes that we assume the relation is based on experience, and that Hume shows not only that the connection is not that of relation of ideas, but also that it is not justified by experience either. When philosophers posit that such connections are relations of ideas, habit leads them to incorrectly assign *a priori* status to concepts that are really derived from experience with the help of the imagination. Kant is highlighting Hume’s belief that many of the concepts that philosophers have claimed are relations of ideas, and therefore *a priori*, actually arise *a posteriori*. Kant believes that Hume was correct to challenge those who could not provide proper justification for the concepts they employed. Furthermore, Kant claims that if Hume’s contemporaries taken his (Hume’s) challenge seriously, the science of metaphysics would have undergone radical corrections. Kant writes,

As premature and erroneous as [Hume’s] conclusion was, nevertheless it was at least founded on inquiry, and this inquiry was of sufficient value, that the best minds of his time might have come together to solve (more happily if possible) the problem in the sense in which he presented it, from which a complete reform of the science must soon have arisen. (*Prolegomena*, 4:258)

According to Kant, though Hume started with an analysis of the concept of causality, that analysis lead him to reject other metaphysical concepts (like the concept of substance) as mere fictions. Using the same strategy that guided him to reject the concept of causality (i.e., demonstrating that we have no impression of such concepts from sensation or reflection), Hume called our other metaphysical concepts into question. The “best minds” of Hume’s time entirely missed the point of his argument. In the case of the concept of causality, they argued that the concept is useful and indispensable, but Hume never calls the usefulness of the concept into question. Instead, he attempts to show that while the concept may be useful, we cannot properly demonstrate its foundation. Kant writes,

[Hume’s] discussion was only about the origin of this concept, not about its indispensability in use; if the former were only discovered, the conditions of its use and the sphere in which it can be valid would already be given. (*Prolegomena*, 4:259)

Because Hume’s contemporaries did not engage with the problem as Hume presented it, metaphysics remained in need reform.

2. Reforming Metaphysics

By taking Hume’s challenge concerning the origin of certain concepts seriously, Kant believes that he can provide metaphysics with a solid foundation. He holds that Hume rightly demonstrated that reason alone could not justify our concept of causality or our causal judgments. In Kant’s words, Hume “undisputably proved that it is wholly impossible for reason to think [of a necessary connection between a cause and an effect] *a priori* and from concepts” (*Prolegomena*, 4:257). Kant holds that Hume correctly identified that experience plays

an integral role in our causal judgments and that inductive judgments made from experience are merely contingent. But, Kant argues, Hume's description of the problem has some important flaws. First, the way in which Hume classifies judgments, ensures that many *a priori* judgments are mistakenly marked as *a posteriori* judgments. Second, judgments *and certain concepts* must have their origin *a priori*, according to Kant (*CPR*, B 5-6). Kant believes that if we correct these flaws in Hume's account, we can put the science of metaphysics on surer footing. We will now consider each of these claims and their importance in more detail.

Recall that Hume argues there are only two classifications of judgments: matters of fact and relations of ideas. We attempt, though ultimately fail, to justify the former through experience while we justify the latter through reason alone. Kant argues that this taxonomy is too limited. While Hume is correct that judgments must be separated into those that are *a priori* and those that are *a posteriori*, he fails to recognize that they must also be separated into those that are analytic and those that are synthetic. On Kant's view, judgments can be analytic *a priori*, synthetic *a priori*, or synthetic *a posteriori*.³⁴ We will consider these distinctions more carefully in the next section, but what is important for our immediate purposes is the point that Hume did not recognize the existence of synthetic *a priori* judgments. Kant holds that these judgments cannot be justified by reason alone (say by using only the principle of contradiction) because they are tied to our form of experience. That is to say, if our experience were different, these judgments would not arise so they are importantly dependent upon our form of experience.

³⁴Kant claims that there are no *a posteriori* analytic judgments. We will consider this claim briefly in the next section.

But, and this speaks to our second claim above, these judgments rely on a special class of concepts (including material substance and causality) that must be in place, if we are to experience the world as we do. According to Kant, we can discover these concepts by using reason to examine what is necessary for our form of experience. Kant holds that these concepts must be in place in order for us to experience the world as we do, thus these concepts must be *a priori*. Kant calls these concepts “pure concepts of the understanding.”

These pure concepts give rise to certain judgments. Once such judgment, according to Kant, is: “Everything that happens has its cause” (*CPR*, A9/B13). The principle of persistence (i.e., the principle of the First Analogy) is another. Kant believes that these judgments are *a priori* and follow with necessity. But again, they are importantly tied to our form of experience such that were our form of experience different, they would not follow with necessity. Hume, Kant claims, did not recognize the category of synthetic *a priori* judgments and how they relate to pure concepts like causality and substance. Thus, he claims, Hume’s skeptical conclusions “arose primarily from a failing that he had in common with all dogmatists, namely, that he did not systemically survey all the kinds of *a priori* synthesis of the understanding” (*CPR*, A 767/B 795). Had Hume recognized that there are certain judgments which are necessary for our form of experience and thus must exist if we are to experience the world as we do, he would have recognized another means of justifying these judgments. Kant believes that proper recognition of the role of synthetic *a posteriori* judgments is the first step in the reformation of metaphysics and the justification of concepts like material substance and causality. Metaphysicians should turn their attention away from trying to find either impressions or analytic proofs of

metaphysical concepts. Instead they should focus on what concepts are necessary for our form of experience.

Now that we have a very general understanding of how Kant will attempt to respond to Hume, we will consider his notion of *a priori* synthetic judgments more carefully. We will consider how they relate to pure concepts and how they differ from *a priori* analytic judgments.

B. The Analytic/Synthetic Distinction and Pure Concepts of the Understanding

As we have seen, Kant will argue, against Hume, that the idea of causality is itself somehow necessary for experience. Likewise, the causal law is necessary for experience. According to Kant, the causal law is not a conceptual truth or relation of ideas, so it is not analytic. It is rather synthetic. Furthermore, he claims it is necessary, so it is synthetic *a priori*.

Our first task in this section will be to explain how Kant describes these different judgments. We will begin by examining Kant's analytic/synthetic distinction. We will then consider how the *a priori/a posteriori* distinction relates to analyticity and syntheticity. Once we have a better understanding of the different possible forms of judgments, we will consider how these judgments arise and how they can be justified. This discussion will lead us to examine what Kant means by a pure concept of the understanding and how these pure concepts can be used justify the class of judgments that Kant calls synthetic *a priori*.

1. Analytic and Synthetic Judgments

Kant points to a few different features that make a judgment analytic.³⁵ The first feature of analytic judgments that we will consider is that, as Kant writes, analytic judgments are “those in which the predicate is thought through identity” (CPR, A 7/B 10). These judgments include judgments like “a = a” but they also include judgments in which, “[e]very analytic feature is identical with the concept, not with the entire concept, but rather with a part of it” (*Metaphysik Mrongovius*, 29:789). In a judgment like “All bachelors are unmarried,” the concept “unmarried” does not have to be completely identical to the concept “bachelor” but only to part of it. The idea here is that the predicate “is unmarried” is identical to at least part of the concept of the subject. What is it to be a bachelor? It is to be unmarried and male and of marriageable age. Since the predicate of the judgment is identical to part of the concept of the subject, the truth of the judgment can be determined merely through analysis.

Kant also claims that analytic judgments are “judgments of clarification” rather than “judgments of amplification.” Analytic judgments help clarify our knowledge of the subject, because they “do not add anything to the concept of the subject, but only break it up by means of analysis into its component concepts, which were already thought in it (though confusedly)” (CPR, A 7/B 11). In our bachelor example, when we broke the concept bachelor into its component parts, we saw that one of the parts was being unmarried. We may gain a better understanding of the concept of bachelor by analyzing its component concepts, but this analysis

³⁵ Kant does not clearly distinguish between the different notions or properly explain which is the most important. He implies that fulfilling any of the criteria is sufficient for demonstrating analyticity.

does not involve adding anything new to the concept of the subject. Kant claims that many in analytic judgments “the predicate B belongs to the subject A as something (covertly) contained in this concept A” (*CPR*, A 7/B 10). The idea here seems to be that though the concept of “unmarried” is contained in the concept “bachelor,” this containment only become explicit once the concept bachelor is analyzed.

Finally, Kant argues that the truth of all analytic judgments “must be able to be cognized sufficiently in accordance with the principle of contradiction” (*CPR*, A151/B190). Kant has in mind something like the following: if we are able to demonstrate the truth or falsity of a judgment using only the principle of contradiction, then that judgment must be analytic. “All bachelors are unmarried” is analytic in this sense because if there were a married bachelor (if it were the case that not all bachelors are unmarried), we would have an instance of something that both is and is not married, given how we define the concept of bachelor. Kant refers to this feature of analyticity as the “universal and completely sufficient principle of all analytic cognition” (*CPR*, A 151/B 191). Note that this feature of analyticity is quite similar to one of Hume’s descriptions of relations of ideas. Hume claims that the denial of a relation of ideas is a contradiction.

We now turn to Kant’s account of synthetic judgments. To put the point somewhat crudely, Kant believes that any judgment that does not possess any of the above features is a synthetic judgment. There are two features of synthetic judgments that are important for our purposes. They are that (a) in synthetic judgments the predicate is not contained in the concept of the subject and (b) synthetic judgments amplify our knowledge of a given subject rather than

merely clarifying our knowledge of it. In synthetic judgments, Kant claims, the predicate B “lies entirely outside the concept A, though to be sure it stands in connection with it” (*CPR*, A 6/B 10). In order to explicate Kant’s conception of a synthetic judgment, we must explain what it means to lie outside a concept yet stand in connection with it. To help explain what Kant means by standing in connection with a concept, we will consider one of his examples of a synthetic judgment and how it relates to a similar example that he classifies as analytic. In the *CPR*, Kant highlights the difference between analyticity and syntheticity by examining the following judgments: 1) “All bodies are extended” and 2) “All bodies are heavy.” Kant argues that the first judgment is analytic while the second is synthetic.

Kant’s discussion of the first of these two judgments in the *Jäsche Logic* will help shed light on the analytic/synthetic distinction. He writes, “To everything x , to which the concept of a body (a+b) belongs, belongs also *extension* (b)” (9:111, note 1). We can see here that body, which is made up of the concepts (a+b) already includes the concept of extension (b). Kant holds that if I analyze the concept body, I will discover the component concepts of extension, impenetrability, and shape etc. but, he argues, I will not discover the concept of heaviness (*CPR*, A8/B 12). This is because the concept of heaviness is not necessarily thought in the concept of body.

Applying the same sort of formulation to the judgment “All bodies are heavy”, we get something like the following: “To everything x , to which the concept of a body (a+b), belongs

also *weight* (c)."³⁶ In this case, the judgment affirms that there is a connection between the predicate (c) and subject (x) but that connection is independent of any connection between the predicate (c) and the concept of the subject (a+b). This judgment thus amplifies our knowledge of the subject because the predicate is not found in the concept of the subject. According to Kant, this is because "I do not include the predicate of weight in the concept of body in general" (*CPR*, A 8/B 12). Though I do not include the predicate of weight in my concept of body, Kant believes that the concept of body and the predicate of weight are closely tied to one another such that I can make the judgment "all bodies are heavy." Kant holds that they are closely tied to one another because whenever I *experience* a body, it has weight. Upon recognizing that whenever I experience a body, it has weight, "I therefore add [the concept of weight] synthetically as predicate to that concept" (*CPR*, B 12).

We must note that this judgment is importantly also different from "All bodies are extended" because in order to justify the judgment "All bodies are heavy," I must appeal to experience; in this case, conceptual analysis will not suffice. As Kant writes, "It is thus experience on which the possibility of the synthesis of the predicate weight with the concept of body is grounded, since both concepts, though one is not contained in the other, nevertheless belong together, though only contingently..."(*CPR*, B 12). Kant highlights the fact that this judgment is only contingently true *because* it is a judgment arising from experience. He agrees with Hume that the constant conjunction of events (seeing a body and seeing that it has weight)

³⁶ Kant uses a different example in the *Jäsche Logic* (all bodies attract), but our formulation follows his example.

is not enough to derive necessity. Anytime we must turn to our experience for the justification of a judgment, the most that we can say is that the judgment is contingently true.

But Kant furthermore argues that not all synthetic judgments are like “All bodies are heavy.” “All bodies are heavy” is a synthetic *a posteriori* judgment. It is justified by appealing to experience. However, Kant believes that there are some synthetic judgments which are *a priori*. We now turn to Kant conception of *a priori* and *a posteriori* judgments. Our examination of Kant’s *a priori/a posteriori* distinction will be brief, but it will include a discussion of the features of *a priority* and *a posteriority* as well as an examination of how these judgments relate to the analytic synthetic distinction. It will also set the stage for section b, where we will examine how synthetic *a priori* judgments are possible according to Kant.

2. *A Priori* and *A Posteriori* Judgments

All *a priori* judgments, for Kant, share two important features: they hold with necessity and with strict universality. Kant believes that if we can show either that a judgment follows with logical necessity or that it has strict universality (it must hold in every case), then we can show that the judgment is an *a priori* judgment. Kant is not very clear on how necessity and strict universality differ, but he believes that sometimes it is easier to show that a judgment cannot have strict universality because it can only be justified through experience while other times it is easier to show that a judgment must hold in every case (i.e., it has strict universality) than it is to show that it follows with logical necessity. He writes,

Necessity and strict universality are therefore secure indications of an *a priori* cognition, and also belong together inseparably. But since in their use it is sometimes easier to show the empirical limitation in judgments than the

contingency in them, or is often more plausible to show the unrestricted universality that we ascribe to a judgment than its necessity, it is advisable to employ separately these two criteria, each of which is in itself infallible. (CPR, B 4)

The discussion above of necessity and strict universality reveals a few features of Kant's account that are important for our purposes and will lead into our examination of his characterization of *a posteriori* judgments. First, when Kant speaks of the "empirical limitation" of judgments, he is referring to judgments that are justified by an appeal to experience. Such judgments cannot be *a priori*. They, like Hume's relations of ideas, must be justified by an appeal to reason rather than experience. As one might expect, Kant believes that all *a posteriori* judgments are contingent. Second *a priori* judgments carry with them a special form of universality: strict universality. These judgments are universally valid judgments that must hold in every case.

When Kant writes of strict universality, he contrasts it with comparative universality. "Comparative universality" describes judgments that are universally valid but merely contingent. These judgments are like many of Hume's matters of fact. "All bodies are heavy" possess comparative universality. Every time I see a body, that body has weight so I make the universally valid judgment about bodies. But I justify this judgment by experience so it is still contingent. Just because up to now every time I have seen a body it has had weight, it does not follow that every body I see in the future will have weight. So while I can make the judgment "all bodies are heavy," I must acknowledge that this judgment does not follow with necessity. As Kant writes,

Experience never gives its judgments true or strict but only assumed and comparative universality (through induction), so properly it must be said: as far as we have yet perceived, there is no exception to this or that rule. (*CPR*, B 3-4)

As one might expect, Kant's notion of comparative universality is closely tied to *a posteriori* judgments. *A posteriori* judgments are those judgments that must be justified through experience. All universally valid *a posteriori* judgments are at best comparatively universal. The judgment "all bodies are heavy" must be justified by appealing to experience, thus it is *a posteriori*. Furthermore, because "I do not include the predicate of weight in the concept of body in general," the judgment is synthetic (*CPR*, A 8/B 12). Thus all bodies are heavy is a synthetic *a posteriori* judgment. This is one of the three types of possible judgments that Kant posits.

As we have seen, "All bodies are extended" is an analytic judgment because the predicate "is extended" belongs to the concept of the subject (body). The judgment is *a priori* because I can demonstrate that the judgment follows with logical necessity. If the concept body (a+b+c) is made up of the concepts of extension (a), impenetrability (b), and shape (c), then it necessarily follows that all bodies are extended, for otherwise there would be a body that both is and is not extended. Thus "all bodies are extended" serves as an example of an analytic *a priori* judgment.

Kant rules out the possibility of analytic *a posteriori* judgments. As we have seen, analytic judgments can be cognized using only the principle of contradiction. That is, there is no need to appeal to experience for their justification. But appealing to experience for justification is exactly what it means for a judgment to be *a posteriori*. He writes,

Judgments of experience, as such, are all synthetic. For it would be absurd to ground an analytic judgment on experience, since I do not need to go beyond my concept at all in order to formulate the judgment, and therefore need no testimony from experience for that. (*CPR*, B 11)

This leaves the final possible form of judgment: synthetic *a priori* judgments. These are judgments in which the predicate lies outside the concept of the subject (and they therefore amplify our knowledge) but they also hold with necessity and *strict* universality. As we noted above, Kant believes that this is the class of judgments that Hume's matters of fact/relations of ideas distinction overlooked. Among Kant's examples of synthetic *a priori* judgments are: "Everything that happens has its cause" and "in all alterations of the corporeal world, the quantity of matter remains unaltered" (*CPR*, B 13-17). The former judgment expresses a version of the principle of causality while the latter expresses a version of the principle of persistence. As we will see, Kant argues that each of these judgments is obviously synthetic. If we take the concept of something that happens, we will not find within that concept the concept of a cause. The concept of a cause "indicates something different than the concept of what happens in general, and is therefore not contained in the latter representation at all" (*CPR*, B 13). In the case of the principle of persistence Kant claims, "in the concept of matter I do not think persistence, but only its presence in space through the filling of space" (*CPR*, B 18).

Kant believes that the syntheticity of judgments such as these is rather clear. Like Hume, he recognizes that in judgments such as these, the predicate is not contained in the concept of the subject. Recall Hume's claim that "The mind can never possibly find the effect in the supposed cause, by the most accurate scrutiny and examination. For the effect is totally

different from the cause, and consequently can never be discovered in it" (*EHU*, 4.1.9). Kant believes that Hume was correct that an effect cannot be found in the cause, but he was wrong to assume that because the concept of an effect is not contained in the concept of a cause, the judgment must be justified by appealing to experience. Kant posits that if we consider what is necessary for our form of experience, we will see that though these judgments are synthetic, they follow with necessity and strict universality.

We now turn to some preliminary remarks concerning how we can demonstrate that certain synthetic judgments hold with necessity and strict universality, according to Kant. We briefly examine Kant's claims that certain concepts are *a priori* and that these *a priori* concepts give rise to *a priori* synthetic judgments. This will set the stage for chapter three in which we will examine in detail why Kant believes that the concept of substance in general is an *a priori* concept.

3. How Synthetic *A Priori* Judgments are Possible

We have seen that, according to Kant, there is an important class of judgments that Hume overlooked: synthetic *a priori* judgments. These judgments amplify (or add to) our knowledge of a given subject but they also hold with necessity and strict universality. Before we turn to Kant's account of material substance in chapter 3, we briefly consider two questions concerning these judgments. However, our goal here is merely to set the stage for Kant's proof of the principle of persistence thus our considerations will be quite general.

Kant believes that both the empiricists and rationalists approached the cognition of empirical objects incorrectly. Thinkers before Kant thought that in order to cognize (or

represent) an empirical object, our cognition must somehow conform to that object. By “conforming” to the object, Kant means something like the empirical object must provide the necessary structure for our representation of it. Kant holds that if we make this assumption synthetic *a priori* judgments would not be possible. This is because the necessary structure would be provided from experience of the object in question. Thus our knowledge of the objects would be *a posteriori* and contingent.

After reading and considering Hume’s critique of causation, Kant put forward a new assumption: perhaps empirical objects must conform to our cognition. That is, perhaps our minds provide the structural framework necessary for the representation of empirical objects and the empirical objects must conform to that structure. If this were the case, then we could presumably obtain *a priori* knowledge of our cognition of objects. If we could pick out what framework is *necessary* for the representation of objects, then we could point to something that *must* be in place prior to our experience of those objects. Because the framework is necessary for the experience of the object, it would be *a priori*. That is, our knowledge of it would be justifiable without an appeal to experience. But because the necessary framework is not contained in the concept of the object (as analytic concepts are), the knowledge is synthetic. As one scholar notes,

[I]f we can discover fundamental forms for the sensory representation and conceptual organization of objects within the structure of our own minds, then we can also know that nothing can ever become an object of knowledge for us except by means of these forms, and thus that these forms necessarily and universally apply to the objects of our knowledge—that is, they are synthetic *a priori*. (Guyer 2006, p. 50)

Kant argues that both the concept of substance in general and the concept of causality are necessary for our experience of objects. That is, they are pure concepts of the understanding. In the First Analogy and the Second Analogy, Kant attempts to show that certain judgments that arise from the pure concepts are also necessary. We now turn our attention to Kant's First Analogy. In it Kant seeks to prove that we must assume a persisting substance in order to perceive objects of experience.

Chapter 3: Kant's Notion of Material Substance as a Response to Hume

The primary goal of this chapter is to explain Kant's proof of the principle of persistence in the First Analogy. To achieve this, we must first lay the groundwork for the proof. Because the main aim of the dissertation is to consider Kant's notion of material substance as it relates to Humean skepticism, we will begin by considering why the principle of persistence in the First Analogy should be considered a response to Humean skepticism. Kant's principle of persistence is a principle that concerns substance in general, not merely material substance. However, when Kant attempts to demonstrate why we must assume material substance, he invokes the principle of persistence. Thus, in order to understand Kant's claims about the necessity of material substance, we must have a clear understanding of the principle of persistence. We first examine what exactly Kant's principle of persistence says. Once we understand what Kant means by the principle of persistence, we turn to Kant's proof. After investigating the assumptions on which the proof relies, we carefully examine the major steps in Kant's proof. In examining the proof, we attempt to make the best case possible for Kant. We attempt to understand the proof and demonstrate why one might be inclined to accept Kant's proof.³⁷ Throughout our examination of the proof, we also highlight some important consequences that Kant takes to follow from his proof. Finally, while explicating the proof and what Kant believes follows from it, we highlight the features of Kant's notion of substance that differ from Hume's conception and consider why these differences are important.

³⁷ In the next chapter, we will examine several possible problems with Kant's proof and whether or not we can save Kant's proof from these difficulties.

I. Setting the Stage for Kant's Proof in the First Analogy

In the First Analogy, Kant attempts to provide a proof for the claim he calls the “principle of persistence of substance.”³⁸ Before we examine exactly what this principle says and how Kant sets out to prove it, we will briefly consider whether or not the idea of substance found in the First Analogy has anything in common with the idea Hume rejects. Recall that our discussion of Hume focused on material substance. In the First Analogy, Kant is concerned with substance in general but the idea Kant seeks to prove in the First Analogy includes many of the features that Hume rejects in the *Treatise*. Once we have reason to believe that the idea of substance that Kant asserts throughout the First Analogy may be viewed as a response to the Humean skeptic, we will show that Kant, in fact, intended the First Analogy as a response to Hume. To do this, we will briefly examine some textual justification for reading the First Analogy as a response to Hume's claims about the idea of material substance.

A. Can and Should Kant's First Analogy be Considered a Response to Hume?

Recall that the notion of material substance that Hume attacks in the *Treatise* includes four essential features. Material substance 1) is a unity, 2) is the bearer of certain properties, which are said to inhere in it, 3) has independent existence, and 4) persists unchanged through time. In chapter 1, we saw that Hume argues that two of material substance's features (viz., its unity and its persistence through time) necessarily imply that the idea is self-contradictory. Furthermore, he claims that once we have a proper understanding of the idea of existence, we will also reject

³⁸ This is the principle's title in the B edition. In the A edition, it is called “The principle of persistence.” We will see that these amount to the same principle, so we will use the two interchangeably.

both the idea that substance is the bearer of properties as well as the distinction between dependent and independent existence.

Though the First Analogy is a proof about substance in general, throughout the proof Kant employs terminology that is nearly identical to that which we find in Hume. Kant refers to substance as a “substratum.”³⁹ He also uses the terms “inherence,” “accidents,” and “persistence.” (*CPR*, A 184-188/B 227-231). More importantly, the meaning that Kant attributes to these concepts is much the same as Hume’s. For instance, substance, according to Kant, is the bearer of properties that are said to “inhere” in it (*CPR*, A 186-7).⁴⁰ Kant’s distinction between substance and accidents is also similar to the notion Hume invokes. According to Kant, accidents rely upon substance for their existence (*CPR*, A 186-7/B 229-30).⁴¹ He posits different forms of existence for substances and accidents. He calls the existence of substances “subsistence” and he refers to the existence of accidents as “inherence” (*CPR*, A 186-7). His notion of substance also includes the idea of persistence.⁴² In fact, in the principle of persistence in the A edition, Kant treats substance as synonymous with “that which persists” (*CPR*, A 182). In the proof of the principle in both editions, he claims that “the proposition that substance persists is tautological” (*CPR*, A 184/B 227). The idea here seems to be that the claim that substance persists is akin to the claim: that which persists, persists.

³⁹ See *CPR*, B 225, A 183/B 226, and A 184/B 227.

⁴⁰ We will consider more closely what Kant means by “inherence” in part II.

⁴¹ Though accidents rely on substance for their existence, we will see that, for Kant, accidents are not entities separate from material substance. They are instead, particular ways for substance to exist.

⁴² One might notice that Hume’s description of persistence involves persisting through time, I have omitted “through time” in describing Kant’s notion. This is due to both the special role time plays in Kant’s system and how persistence relates to time on Kant’s account. We will consider both of these aspects in depth when we turn to the proof of the First Analogy.

Unity, the final feature of Hume's notion of material substance, also plays a role in Kant's conception of substance in general. However, as we will see when we examine Kant's proof, the function of unity is not *merely* to explain how various distinct qualities are connected in a single object. So while Kant certainly recognizes the importance of the unity in relation to substance, his use of the term is different than Hume's.

While the idea of substance presented in the First Analogy is, in certain respects, importantly different from the idea Hume considers, we will see that the differences in Kant's conception are needed precisely because he aims to respond to Hume's claim that substance is a fiction. I argue that Kant's idea of substance is meant as a correction to the idea posited by Hume. As we saw in chapter 2, we find evidence that Kant *intends* the First Analogy as a response to Hume in a section of the *CPR* entitled the "Doctrine of Method." In that section, Kant explicitly states that the principle of persistence directly relates to Hume's skepticism. He writes,

The skeptical aberrations of this otherwise extremely acute man [i.e., Hume] arose primarily from a failing that he had in common with all dogmatists, namely, that he did not systemically survey all the kinds of *a priori* synthesis of the understanding. For had he done so, he would have found, not to mention any others here, that e.g., the principle of persistence is one that anticipates experience just as much as that of causality. (*CPR*, A 767/B 795)

This quote demonstrates that Kant was obviously aware of Hume's treatment of the idea of substance. It also reveals that, according to Kant, Hume would have accepted the principle of persistence of substance, if he had systemically surveyed "all the kinds of *a priori* synthesis of the understanding." While this passage is still somewhat difficult to discern, one thing that is clear from the outset is that Kant was convinced that Hume missed something important about

the principle of persistence of substance. Hume did not recognize that it “anticipates experience.”

In the last chapter, we saw what Kant means by surveying “all the kinds of *a priori* synthesis of the understanding.” Kant is referring to the fact that Hume missed a class of possible judgments: synthetic *a priori* judgments. But the above passage raises two other important questions: First, what exactly is the principle of persistence, according to Kant? Second, why, according to Kant, does principle of persistence anticipate experience? In chapter 2, we began to sketch answers to these two questions, but each needs a great deal more attention. In the next section, we will consider these questions. The first question will lead us to examine the wording of the principle of persistence provided in the two versions of the First Analogy in the first *Critique*. We will consider how we should interpret the fact that Kant presents two different versions of the principle of persistence. We will then turn to the second question. This question will guide us in understanding the general strategy Kant employs in his proof of the First Analogy.

B. The Principle of the Persistence of Substance

What is Kant’s principle of persistence? This question is difficult to answer given that the wording of the principle differs dramatically in the A and B editions of the text. The two versions of the principle are:

A edition: “All appearances contain that which persists (substance) as the object itself, and that which can change as its mere determination, i.e., a way in which the object exists.”(CPR, A 182)

B edition: “In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature.” (*CPR*, B 224)

The significantly different wording of the principle in the A and B edition may lead us to wonder about the relation between these two principles. Are they supposed to be two ways of saying the same thing, or did Kant, upon reflection, provide a new principle of persistence for the B edition?

On the face of it, it appears that Kant provides two different principles. Kant seems to move from defining a necessary feature of appearances (in the A edition) to a description of what occurs when an appearance changes (in the B edition). Each of these principles is followed by a proof. While the principle appears to change significantly from the A to the B edition, the proof does not. The proof is essentially the same in both editions. In the B edition, however, Kant provides a significantly different and expanded first paragraph. While the proof in the A edition makes no mention of substance’s “quantum in nature,” the phrase plays an important role in the final line of the supplemented paragraph in the B edition.⁴³ In that line, Kant claims to have established that the quantum of substance can neither increase nor diminish in nature. Thus it is natural to wonder whether Kant sought to prove a new principle in the B edition or whether the changes he made in the B edition were meant to help clarify the principle of persistence and how it is proven. In what follows, we will see that the principle in the B edition is merely another way of stating the principle of the A edition. The lengthy first paragraph

⁴³ The phrase “quantum in nature” may lead one to believe that, in the First Analogy, Kant is concerned with *material* substance not merely substance in general. In chapter 4, we will see that though Kant uses this phrase and his examples focus on material substance, the principle of persistence is a principle governing substance in general.

added to the B edition actually serves as an outline of the principle's proof. If the proof succeeds, then both editions demonstrate that substance's quantum in nature can neither increase nor diminish; the B edition proof merely makes this claim more explicit.

Assuming that Kant means the same thing by the two principles, what exactly are they saying? That is, what is it that Kant seeks to prove in the First Analogy? As we saw in chapter 2, we can give a preliminary expression of his aim as follows: In order for objects of experience to appear to us as they do, we must presuppose the concept of substance—conceived of as something eternally persistent (i.e., as something that can neither come into existence nor go out of existence). In other words, our experience of objects of perception presupposes the principle of persistence.

While we now have a rough description of the principle of persistence, we will need to turn to Kant's proof for a full explanation of it. But before we do so, we will consider our second question from above. That is, what does it mean to say that the principle of persistence anticipates experience? We have already hinted at the answer, but we will use this question as a guide to the general structure of Kant's proof of the principle of persistence.

When Kant refers to the principle of persistence as something that "anticipates experience," he is maintaining that there are certain rules that we must employ in order to make any judgments about experience. The principle of persistence is one such rule. The principle "anticipates" experience in the sense that it is a judgment that arises from a concept that is necessary for our form of experience. Kant argues that all objects of experience are experienced temporally and the principle of persistence is necessary for temporal experience. To better

understand why Kant holds that all objects are experienced temporally, we very briefly turn to Kant's notion of the forms of intuition.⁴⁴

As we saw in chapter 2, Kant argues that empirical objects must conform to our cognition. Our minds provide the structural framework necessary for the representation of empirical objects and the empirical objects must conform to that structure. The structure to which empirical objects must conform comes from what Kant calls our pure forms of intuition and our pure concepts of the understanding. Roughly stated, the forms of intuition provide the basic structure to the material we receive from sensation that allow us to sense objects. Kant makes an important distinction between our ability to sense objects and our ability to think about objects. The pure forms of intuition are necessary for sensation, but in order to think of objects we must also employ certain necessary concepts. He calls these concepts, which are necessary for thought, the pure concepts of the understanding. These concepts are necessary because thought could not arise without them. Kant believes that they are *a priori* concepts that could not be obtained from experience. As we have noted, Kant believes that material substance is one such concept. This concept is integrally tied to one of the forms of intuition.

The pure forms of intuition are space and time. Kant holds that all objects of outer experience (objects that we experience as being distinct from ourselves) are represented in space. Thus he claims that space is our form of intuition that governs outer sense (*CPR*, A 22/B 37). He argues that whenever we experience an object as distinct from ourselves we necessarily experience it spatially. Because we must represent objects of outer experience in space in order

⁴⁴ For a more thorough examination of Kant's forms of intuition see Hatfield, pp. 61-93; Shabel, pp. 93-117.

to represent them at all, Kant holds that this form of intuition is *a priori*. He argues that it cannot come from experience, because it is what makes experience possible. Similarly, Kant claims that time is our form of intuition that governs both inner and outer sense. As such, he holds that “Time is the *a priori* formal condition of all appearances in general” (*CPR*, A 34/B 50). This is important because while space, as pure form of intuition, is needed to represent outer objects, time is necessary to represent any object whatsoever. Kant claims that all representations, whether they are representations of objects distinct from ourselves or not, are determinations of the mind. As such, he claims, they are all structured temporally. Thus, he claims, the pure forms of intuition are necessary for experiencing objects at all.

Kant provides these claims in a section of the *CPR* entitled, “The Transcendental Aesthetic.” Several of the claims Kant makes in the “The Transcendental Aesthetic” are important for our purposes. First, as we have seen, Kant holds that our experience of objects is necessarily temporal. That is, when we sense any object of experience (either as in a different place from ourselves or not), our minds provide a temporal structure for that experience. Kant will argue that in order for these sensations to become objects of thought, the concept of material substance is in addition necessary. Second, in the “The Transcendental Aesthetic,” Kant argues that time is not an “actual entity” (*CPR*, A 23/B 37).⁴⁵ He holds that we have no experience of time itself (or space itself for that matter). He writes, “Time is not an empirical concept that is somehow drawn from experience” (*CPR*, A 30/ B 46). His claim is that we could not represent objects as co-existing or as existing successively if time did not provide the objects

⁴⁵ Kant poses the question whether or not space and time are actual entities (A 23/B 37). He answers negatively in the First and Second Section of the Aesthetic.

with a temporal structure *a priori*. The temporal structure cannot be taken from experience because in order to have the experience, the temporal structure must already be in place. We will see that this claim that time itself is not an object of experience will play a crucial role in Kant's proof of the First Analogy.

In the proof of the First Analogy, Kant argues that we experience objects in different ways (*CPR*, A 182-183/B 225-226). We necessarily experience objects in time, and either as changing over time or as co-existing in time. He argues that the concept of substance necessarily underlies these experiences. He contends that *any* temporal experience that we have necessarily utilizes the concept of an eternally persisting substance underlying objects of experience. We will see that this is in large part due to the claim we considered above: according to Kant, we do not have any perception of time itself. Our representation of time itself and its modes arises, in his view, only because we bring to experience the concept of persisting substance.

Consider, for example, the following case of an object changing over time: we perceive a ship moving down stream.⁴⁶ We experience the ship as existing at different successive states in time (at time T_1 it exists at point A, at T_2 it exists at point B, etc.). As an example of our perception of objects coexisting (that is, as existing simultaneously), Kant has in mind the following kind of case: we perceive the earth and the moon as existing at the same time.⁴⁷ He refers to succession and simultaneity as two of the "ways" or "modes" of time. These modes lead to our judgments of different "relations" in time, and Kant sets out to demonstrate that the

⁴⁶ This is Kant's example from *CPR*, A192/B 237.

⁴⁷ This is Kant's example from *CPR*, B257.

principle of persistence is necessary for our experience of these modes of time (*CPR*, A 182/B 226).⁴⁸

In the Analogies of Experience, Kant attempts to thoroughly explain the different modes of time and why the principle of persistence is necessary for them. Roughly speaking, the First Analogy describes why the principle is necessary for *any* temporal experience of objects, the Second Analogy describes why the *a priori* law of cause and effect is necessary for our representation of necessary successive order (that is, our representation of events). The Third Analogy explains how it is possible for us to experience objects as co-existing. Each Analogy is closely tied to the others, and the proofs of the Second and Third Analogy assume the truth of principle of persistence. Thus, in order to thoroughly explain any of the modes of time, Kant must prove the principle of persistence.

In the next section, we examine Kant's proof. We will see that all of the necessary steps for the proof can be found in both versions of the First Analogy. So if the proof succeeds, both versions would demonstrate Kant's claim in the B edition that the quantum of substance can neither increase nor diminish. But before we turn to the proof, we first examine four important assumptions on which Kant proof relies. Kant argues for these assumptions elsewhere in the *CPR*, and provides no justification for them within the First Analogy. Thus, we will briefly consider why Kant makes these assumptions. We will also briefly consider whether or not Hume would accept these assumptions, leaving a detailed discussion of Hume's relation toward each assumption for chapter 5. We then turn to Kant's First Analogy, breaking the

⁴⁸ At times, Kant also refers to persistence as a mode of time. We will consider this claim in detail in the next section.

proof of the principle of persistence into two major steps. We will examine each of these steps in detail and provide Kant's argument for them.

II. Kant's Proof of the Principle of Persistence

A. Assumptions

Kant's proof of the First Analogy (and, in fact, his proofs of the Second and Third Analogy) rests upon a few extremely important claims that are assumed throughout the Analogies. In this section, we will consider four necessary assumptions for the proof of the principle of persistence. These assumptions are scattered throughout the First Analogy and Kant does not flag them as assumptions. This is not surprising because, as we noted above, while these claims are assumed as part of the proof, Kant argues for each of them elsewhere in the *CPR*. We will therefore provide Kant's justification for each assumption after they are introduced. Because the assumptions are scattered throughout the proof, and their order of introduction does not appear to be important, we will consider them in the order in which they are most easily understood.

1. We Cannot Perceive Time Itself

The first assumption is that we cannot perceive time itself. Kant reiterates this claim several times throughout the *CPR*.⁴⁹ As we saw in the last section, Kant argues that space and time are forms of intuition which are necessary for our representation of appearances. But Kant claims that while space and time are necessary for our representation of objects, space and time "are

⁴⁹ Kant explicitly makes this claim in each of the Analogies see B225, A 183/B 226, B223, B 257. When he writes, "For an empty time...is not an object of perception" (A 188/B 231), Kant is merely restating this claim. To perceive an empty time, would be to perceive time itself, i.e., we would perceive time with no objects in it. We will consider this in greater detail when we turn to the proof.

not things (but mere modes of representation)” (*Prolegomena*, §13, Note III, 4:293). He claims that while we necessarily experience both inner and outer objects temporally—that is, as existing in time—we do not and cannot have a perception of time itself. He writes,

Now time cannot be perceived by itself. Consequently it is in the objects of perception, i.e. the appearances, that the substratum must be encountered that represents time in general and in which all change or simultaneity can be perceived in apprehension through the relation of the appearances to it. (*CPR*, B 225)

For Kant, this representation of time involves ordering our successive representations against a backdrop of something persistent. We will consider this claim in greater detail momentarily (as it plays an important role in the proof of the principle of persistence), but first we examine why it is important for Kant to emphasize that we cannot perceive time itself.

Kant’s general strategy in the First Analogy is to try to demonstrate that in order for us to perceive change, there must be something constant which serves as a backdrop against which we can judge that change has occurred. To put the point somewhat crudely, in order to perceive an object undergoing change over time, there must be something that ties the different representations of the object together. If nothing tied the different representations together, we would have no way of viewing the different representations as representations *of the same object*. Kant argues that without a constant that binds successive representations together, we would not perceive objects at all.⁵⁰

Kant also insists that, if we were able to perceive time itself, it could serve as the needed constant. Our perception of time itself would account for the needed backdrop against which we could judge objects existing successively or simultaneously. By ruling out the possibility of

⁵⁰ We will consider this claim in greater detail momentarily.

appealing to a perception of time itself, Kant sets the stage for his proof of the principle of persistence.⁵¹

Before we turn to the next assumption, we briefly note how Hume would react to this assumption. Hume appears to agree with one important aspect this assumption. Like Kant, Hume believes that we have no simple impression of time itself. In the *Treatise* he writes,

Five notes play'd on a flute give us the impression and idea of time; tho' time be not a sixth impression, which presents itself to the hearing or to any other of the senses. Nor is it a sixth impression, which the mind by reflection finds in itself.
(*Treatise*, 1.2.3.10)

In the fifth chapter, we will see that while Hume agrees that we cannot perceive time itself, he disagrees with the claim that there must be something relatively persistent underlying objects of perception.

2. Our Apprehension of the Manifold of Appearance is Always Successive

The next assumption on which the proof of the principle of persistence relies is: “Our apprehension of the manifold of appearance is always successive, and is therefore always changing” (*CPR*, A 182/ B225). Though what Kant means is not immediately clear, once we understand it we will see that it, too, is closely tied to Kant’s account of time as a form of intuition. When Kant refers to the “manifold of appearance,” he means to describe the collection of empirical content that we receive via sensation. When he says that our apprehension of that

⁵¹ Here, I do not mean to suggest that the only reason Kant claims that we cannot perceive time itself is to ensure a place in his system for the principle of persistence. On the contrary, it is because he believes that time is a form of intuition and cannot itself be an object of perception, that the principle of persistence is necessary. Thus when Kant reiterates his claim that time itself is not an object of perception, he means to highlight the fact that the principle of persistence serves as a necessary condition for our form of experience.

manifold is always successive, he is once again referring to one of our forms of intuition. Kant holds that the empirical content given to us through the senses is always structured successively by our intuition. Furthermore, we are constantly receiving new empirical data from sensation that our forms of intuition must structure. As we saw in the last chapter, without this structure, we would not be able to perceive objects. Kant's claim that we apprehend the manifold of appearance successively is another way of saying that our experience of the external world is an experience that is continually changing and sequentially ordered. The important feature of this assumption in Kant's proof for the principle of persistence, as we will soon see, is that we experience this manifold as a successive series of "nows." As we saw in the first chapter, though Kant's vocabulary is quite different, Hume too believes that all of our impressions are momentary and successively ordered.

3. All Appearances are in Time

The third assumption is closely related to the claim that the manifold of appearance is always successive, and it, too, follows from Kant's claim that space and time are our forms of intuition. Kant claims that "all appearances are in time" (*CPR*, A 182/B 224). What he means is that whenever we experience an object of perception, we necessarily experience it temporally. As we have seen, he believes that this follows from the claim that time is "the *a priori* formal condition of all appearances in general" (*CPR*, A 34/B 50). Time provides the structure needed for us to represent both inner and outer objects of experience. Thus any empirical objects we perceive will have this structure and will therefore be perceived in time.

We ought emphasize the importance of how this third assumption differs from the claim that our apprehension of the manifold is successive. The two claims differ in that, according to Kant, the successive nature of our representations alone is not enough to account for our temporal experience. When Kant claims that all appearances are in time, he is claiming not only that the manifold of appearance is always successive but also that those successive representations are structured in such a way that we are able to perceive them temporally.

This distinction is also important because it does not seem to be a distinction that Hume appreciates. In chapter five, we will see that Hume's conception of time is problematic because he does not properly conceive of this distinction. Though Hume believes that our idea of time is dependent on successive representations, he does not indicate that we must represent all objects temporally.

4. There are Three Different Modes of Time

We turn now to the fourth and final assumption necessary for understanding Kant's proof in the First Analogy. Kant claims there are, for us, different "modes" of time. These modes are persistence, simultaneity and succession (*CPR*, A 177/B 219).⁵² Kant claims that these modes are the *only* modes of time. In the First Analogy, Kant holds that persistence is importantly different from the other modes, in that persistence is needed to give rise to the other modes. However, when discussing the different modes of time, he appears to contradict himself. In the proof for the Analogies of Experience, he claims that all three modes of time lead to judgments about different "relations" in time. He writes, "The three *modi* of time are **persistence, succession** and

⁵² We will consider this distinction in much greater detail when we turn to the proof.

simultaneity. Hence three rules of all temporal relations of appearances...precede all experience and first make it possible" (*CPR*, A 177/ B 219). But in the First Analogy, he claims there are only two relations in time. He writes, "[F]or simultaneity and succession are the only relations in time" (*CPR*, A 183/B 226).

Why does Kant treat persistence differently than simultaneity and succession in the First Analogy, when he seems to treat them all together in the proof for the Analogies of Experience? How do Kant's modes of time differ from relations in time? We must first note that what Kant says is that there are three *rules of all temporal relations*. He does not say that there are three relations. We will see that while the principle of persistence is a rule that is necessary for temporal relations, it need not be considered a relation itself. We now consider two reasons why it is important that Kant views persistence differently from the other modes of time.

Kant argues something like the following in *CPR*: Any *single* object of appearance can be judged in different temporal ways. We can judge it as existing successively (here we judge that it exists in successive states over time) like the ship moving down stream. We can judge it as co-existing with other objects (here we judge that it exists at the same time as other objects of appearance) like the earth and the moon. Or we judge that it persists (here we judge that it remains the same over time); we could use the ship, the earth or the moon as examples of persisting objects. Though each demonstrates some change over time, we judge them as persisting—as objects undergoing change—through time. We could refer to each of these judgments as judgments concerning the different modes of time. In contrast, when we *compare* objects, we are concerned with how objects are related to one another in time.

Objects of appearance can be related to one another in one of two ways: they can exist at the same time, or they can exist at different times. That is, they can exist either simultaneously or successively. If we were to judge that two objects persist with one another, then we would judge that the two objects exist simultaneously. Here persistence would be judged as simultaneity. So when we consider our judgments that compare two objects in time, there are only two ways in which they can be related.

In the proof for the Analogies of Experience (where he highlights the three different modes of time), Kant is describing the different ways we can experience a single object in time. In the First Analogy, he is describing how two or more objects can be related to one another in time. This distinction is important because in the First Analogy, Kant uses the claim that there are only two relations in time to argue that were we to judge that more than one time exists, those times would have to be related in one of two ways: they would have to exist either simultaneously or successively. He then attempts to show that each possibility is absurd. That is, his proof relies upon the claim that there are only two relations in time.

Secondly, and more importantly, the mode/relations distinction highlights the fact that Kant clearly views persistence differently from the other modes in the First Analogy. When he claims that there are only two relations of time in the First Analogy, he points to the fact that he holds persistence to be, in some sense, more primitive than the other modes. He argues that in order to experience either simultaneity or succession, we must have something permanent that serves as a backdrop. In order to experience objects in time, we must treat time itself as a kind of object that underlies both simultaneity and succession. To better understand this claim we will

quickly turn to a claims Kant makes in the B edition of the *CPR*. He writes, “All appearances are in time, in which, as substratum...both simultaneity as well as succession can alone be represented” (*CPR*, B 224).⁵³ Though the quote is brief, it is quite important and quite complicated.

Taken on its own, the quote can be somewhat misleading. Kant calls time a “substratum,” which is necessary for the different modes of time (simultaneity and succession). In the last section, we saw that Kant refers to substance as “substratum.” Since he uses the same term to refer to time, one might think that Kant believes that “time” and “substance” are equivalent. But, as we saw, Kant argues that time itself is not an object of perception. It cannot serve as the necessary constant against which we can perceive change. He reserves that role for material substance, so we can quickly rule out any possible equivalence.

So what does he mean when he refers to time as “substratum”? Kant is claiming that we treat time like an object which underlies our experience of succession and of simultaneity. Time itself is not an object of experience, but we treat it like a persisting object in order to account for our experience of succession and simultaneity. To experience objects as existing successively is to experience them as existing *sequentially in time*. To experience them simultaneously is to experience them as existing *at the same time*. But in order for us to experience objects at all, we employ the rule of persistence. To put the point another way, in order to perceive objects A and B as related to one another either successively or simultaneously already presupposes that we are able to perceive objects. But what do we mean here by object? Kant argues we mean

⁵³ In the A edition Kant makes what is essentially the same claim when he writes, “All appearances are in time. This can determine the relation in their existence in two ways, insofar as they exist either successively or simultaneously” (*CPR*, A 182).

something that lasts through time. On his view, we must assume the rule of persistence whenever we employ the other modes of time. Hence it is still a rule of the two different temporal relations. Kant writes, “[A]ll change and simultaneity are nothing but so many ways (*modi* of time) in which that which persists exists. Only in that which persists, therefore, are temporal relations possible (for simultaneity and succession are the only relations in time).” (*CPR*, A182-183/B226). In omitting persistence from the list of relations in time in the First Analogy, Kant stresses how persistence differs from the other modes of time.

It is important to note that Hume would also disagree with this assumption. Though he may grant Kant the possibility of simultaneity and would certainly grant Kant the importance of succession as it relates to our idea of time, he clearly rejects the role of persistence. When Hume discusses persistence, he uses the term duration. For him, our idea of duration does not point to anything that actually endures. Instead it is a fiction that arises from our perception of successive representation. He writes,

I know there are some who pretend, that the idea of duration is applicable in a proper sense to objects, which are perfectly unchangeable; and this I take to be the common opinion of philosophers as well as of the vulgar. But to be convinc’d of its falsehood we need but reflect on the foregoing conclusion, that *the idea of duration is always deriv’d from a succession of changeable objects, and can never be convey’d to the mind by any thing stedfast and unchangeable.* (*Treatise*, 1.2.3.11, my emphasis)

In the final chapter, we will consider whether or not Hume’s rejection of this assumption is justifiable given the other assumptions that he grants Kant. Here, we merely emphasize an important difference between the two: Kant argues that persistence is necessary for the

experience of succession while Hume believes that our experience of succession brings rises to the unjustifiable notion of persistence.

These four assumptions, viz., 1) we cannot perceive time itself, 2) our apprehension of the manifold of appearance is ever changing, 3) all objects of experience are in time and 4) there are two and only two distinct relations of time, are necessary if Kant's proof has any chance of success. Though Hume does not accept each assumption, we will grant Kant these assumptions for the moment and see whether or not the rest of the proof follows. In the fifth chapter, we will consider whether or not Hume is (either knowingly or unknowingly) committed to each assumption.

B. The Proof of the Principle of Persistence

As we have noted, in the First Analogy Kant attempts to show that the principle of persistence is necessary for our experience of objects. In the First Analogy, he engages in three different but related tasks. 1) He attempts to provide a proof for the principle of persistence, 2) he provides examples of the principle at work and 3) he highlights some important consequences which follow from the principle. While it is not too difficult to separate the examples of the principle from the proof of it, it can be quite taxing to distinguish between the steps needed to prove the principle and the implications which follow from it. Kant does not help us with this task. He implies that everything that follows the statement of the principle of persistence is part of its proof. As we will see, the proof of the principle of persistence actually comprises very little of the First Analogy. The bulk of the First Analogy is actually devoted to examples of the principle of persistence and the implications which follow from it. In this section, we attempt to explain

the proof of the principle, making use of some of Kant's examples. We also examine some of the important consequences Kant takes to follow from the principle.

The proof Kant provides in the First Analogy has been the subject of much debate. Scholars disagree over several important aspects of the proof. Among the issues they consider are how many steps are necessary for the proof, how to interpret the steps, and even how many proofs make up the First Analogy.⁵⁴ While it is clear that Kant believes that the principle of persistence is a necessary condition of our experience of objects, it is not clear from the outset exactly why this is. In the First Analogy, Kant attempts to show that our experience of objects in time necessarily presupposes a certain rule or principle. The proof of this claim has two important steps. These two steps utilize the four assumptions that we examined in the last section. In the first step, Kant argues for what I will call the "principle of relative persistence."⁵⁵ According to this principle, all appearances must be governed by the following rule: all objects of appearance contain something which relatively persists which underlies them. Kant never explicitly argues for the principle of relative persistence, but I will attempt to show that he must hold this principle, if he is to prove the principle of persistence—the principle describing absolute persistence. In the next major step, Kant moves from the principle of relative

⁵⁴ Allison (2004) holds there are 7 steps in the proof. Ewing and Gardner hold there are 5 major steps in the proof. Guyer (1987) claims that Kant's proof is actually three separate arguments. Kemp Smith (1992) and Melnick (1973) argue that Kant provides two separate proofs in the First Analogy (though they do not agree on what those two proofs are). We consider the explications of other authors and why our interpretation is preferable in chapter 4.

⁵⁵ Following Allison 2004, pp. 236-246, I use the term "persistence" to mean a form of existence that can neither come into nor go out of existence; it is eternal existence. I use the terms "relatively persistent" and "lasting" to mean a form of existence that extends through some stretch of time; it is not merely momentary existence, but it is not necessarily eternal either. Guyer 1987, pp. 215-216 and Van Cleve pp. 105-121 use the term "relatively enduring" and distinguish it from "absolutely permanent" substance.

persistence to the principle of absolute persistence. He moves from the claim that the appearances must contain something which relatively persists to the claim that the appearances contain something which persists eternally. He then attempts to show that because principle of persistence holds (because the appearances must contain something which persists), it follows that quantum of that persisting thing can neither increase nor diminish. We now turn to the first of these two steps.

1. The Proof of the Principle of Relative Persistence

Recall that Kant claims that our experience of time includes two different temporal relations: simultaneity and succession. Thus, he claims, we can experience objects in time in more than one way. While we accepted this claim as an assumption, we will now consider it a bit more carefully to draw out some important consequences that follow from it. Let us return to our earlier examples. According to Kant, my experience of a ship moving down stream is importantly different from my experience of the earth and moon coexisting. He claims that while both of these experiences occur in time, and thus involve a series of successive representations, they highlight an interesting feature of our experience. In the first case, I judge that my successive representations are of the ship moving from place to place. Let us say, for the sake of simplicity, that my successive representations of the ship are of the ship existing at point A, then point B and then finally to point C. In the second case, although I first perceive the earth and then the moon, I judge that the two objects coexist.

What is importantly different in these two cases, Kant believes, is that we do not perceive the ship as existing *simultaneously* in different positions, while in the case of the earth

and the moon that is exactly what we perceive. Assuming that I first direct my perception to the earth, Kant claims that I could have just as easily directed my perception first to the moon. Insofar as I judge the objects of my perception to exist simultaneously, I also judge that the successive order of my perceptions does not reflect any order in the objects themselves. In this case, “the perception of one can follow the perception of the other reciprocally” (*CPR*, B 257). Kant argues that in this case the order of my perception is not fixed. Because we judge that the earth and the moon coexist, I can choose the order in which I perceive them. In cases in which we judge that we are perceiving succession, as in the case of the ship moving downstream, we assume that the successive order of our perception is irreversible. I must perceive the ship’s movement as possessing a fixed order. I do not have the ability direct my perception to perceive it first at point C then to B then to A.⁵⁶ Given that we are able to represent objects as existing in the two different ways, Kant argues that we have two different relations of time: we can perceive objects as existing simultaneously with other objects or as existing successively.

One might argue that simultaneity and succession are not the only ways we represent objects in time. One might also question whether the fixed order of succession vs. the non-fixed order of simultaneity is the best way to distinguish between the two relations of time. But all that Kant needs at this point for the proof of the principle of relative persistence is that our

⁵⁶ One might argue that the order of representation is not fixed in the way that Kant suggests. For example, we could set up an elaborate system of mirrors so that it appears that the ship moves from C to B to A. Why should we think the order is fixed if the ship appears to move from A to C without the mirrors and C to A with the mirrors? However, this misses Kant’s point. In each case the order is still fixed to the perceiver. If the mirrors were not present the perceiver could not direct her perception to perceive the object as moving from C to A and if the mirrors were present she could not direct her perception to perceive it as moving from A to C.

experience of time includes at least two ways of representing objects in time which include succession and simultaneity. He argues that in order to experience objects through these relations, we must employ the principle of relative persistence. Kant's main argument for this claim is found at the beginning of the second paragraph in the First Analogy. He writes,

Our **apprehension** of the manifold of appearance is always successive, and is therefore always changing. We can therefore never determine from this alone whether this manifold, as object of experience, is simultaneous or successive, if something does not ground it **which always exists**, i.e., something **lasting** and **persisting**, of which all change and simultaneity are nothing but so many ways (*modi* of time) in which that which persists exists. Only in that which persists, therefore, are temporal relations possible (for simultaneity and succession are the only relations in time), i.e., that which persists is the **substratum** of the empirical representation of time itself, by which alone all time-determination is possible. (CPR, A182-183/B226)

To better understand Kant's point here, we will return to one of our previous examples. Consider an object of experience that we judge to be a ship moving downstream. Again for simplicity's sake we will posit that my representations of the ship are of the ship existing at point A, then point B and then finally point C. The quote above begins by asserting our second assumption: the manifold of appearance is always changing. Using this assumption, Kant proceeds to argue that our experience of time itself and of the different modes of time rely upon something relatively persistent or lasting.⁵⁷ Kant claims that when we judge these continually changing representations as representations of the same object, we assume that there is something that links these changing representations together. That is, we hold that there some

⁵⁷ As the quote indicates, Kant claims that it relies upon something persisting absolutely, but I do not believe that he is warranted in making this claim yet. Here he is attempting to show why something lasting is necessary for our perception of objects and temporal relations. We will see that this lasting thing need not be persistent to serve this function; any relatively persistent thing could do so. Kant has not yet introduced the unity of time, which, we will see, is necessary for the move to absolute persistence.

ground for treating the changing representations as changing representations of the same thing. If nothing persisted through the successive representations, Kant argues, we would have no such ground; we would just have a continually changing set of representations. In other words, we would not judge that the same object was moving from A to B to C.

In a section of the A edition of the *CPR* entitled “On the Synthesis of Reproduction in the Imagination,” Kant provides an example that will help to reveal the force of this claim. He asks us to consider the possibility that cinnabar constantly changed all of its properties from moment to moment such that it were “now red, now black, now light, now heavy” (*CPR*, A 100-101). He claims that if this were to occur, then our “empirical imagination would never get the opportunity to think of heavy cinnabar on the occasion of the representation of the color red” (*CPR*, A 100-101). Kant’s point in this discussion is to show that in order to represent objects that are no longer present to our senses, our imagination must be subject to certain rules. But, and this is what is of particular interest for our purposes, Kant argues not just that we need rules to represent objects no longer present to our senses, but also that the appearances themselves must be subject to certain rules if we are able to represent them as objects at all (*CPR*, A 100). How could I perceive cinnabar if all of its properties were in constant flux? What would this be a perception of? Kant does not believe that we can answer these questions.

Since we are indeed able to represent objects even though the manifold of appearances is always changing, appearances must be subject to some rule that allows us to link the different representations together. Kant has this point in mind when he writes,

Only through that which persists does **existence** in different parts of the temporal series acquire a **magnitude**, which one calls **duration**. For in mere

sequence alone, existence is always disappearing and beginning, and never has the least magnitude. (*CPR*, A 182-183/B 226)

If we were to experience nothing as relatively persistent, then everything would be like cinnabar in the example above. We would perceive merely flashes of continually changing empirical data. In order to perceive something as an object, that thing must display existence for some duration. Thus our representation of objects requires something relatively persistent which underlies the object.

In the First Analogy, however, Kant is not merely arguing that what I have called the principle of relative persistence is necessary for our perception of *objects*, he is also claiming that it is necessary for our representation of *time*. Near the end of the lengthy quote above Kant argues,

Only in that which persists, therefore, are temporal relations possible (for simultaneity and succession are the only relations in time), i.e., that which persists is the **substratum** of the empirical representation of time itself, by which alone all time-determination is possible. (*CPR*, A182-183/B226)

Why, according to Kant, would it be impossible to empirically represent time itself, if we did not bring the principle of relative persistence to experience? Why couldn't we experience time, if our experience were just a series of momentary flashes which were not governed by a rule like the principle of relative persistence? Kant's claim is that to experience something as a "momentary flash" is already to assume such principle. It is to assume that a temporal sequence has magnitude (where magnitude is considered akin to having some duration, however long). If our perception were to occur as our cinnabar case supposes, we would have no experience of an "instant" or a "moment" because these terms describe a way of existing in time. They are used

to distinguish those things that we do not experience as relatively persistent from other things that do we experience as relatively persistent. Since we are indeed able to perceive objects in time, and we can distinguish one moment from the next, Kant claims there must be something which relatively persists that grounds our experience of time. This is what Kant means when he claims, “that which persists is the **substratum** of the empirical representation of time itself, by which alone all time-determination is possible” (*CPR*, A182-183/B226).

In the lengthy quote above, Kant also claims that the relations of time, succession and simultaneity, also depend upon the principle of relative persistence. It is not surprising that something lasting must ground our experience of succession and simultaneity since, as we have seen, something lasting must ground our experience of time itself and Kant argues that time itself underlies its modes. But one might wonder why we could not experience succession or simultaneity if our perception of objects were like the cinnabar case. After all, Kant lists the successive states of the existence of cinnabar. He writes, it is “now red, now black, now light, now heavy” (*CPR*, A 100). For example, assume we have a momentary flash of something red and something black. Why couldn’t we experience simultaneity? We might wonder, in other words, why should we believe that the principle of relative persistence underlies our notions of simultaneity and succession?

In the case of succession, this question leads us to an interesting feature of our experience. Our experience of succession necessarily involves a judgment about order. Our experience of succession is something like an experience of a sequentially ordered series. In our example of the ship moving downstream, it is only because we judge that the ship, the stream

and the surroundings are relatively persistent objects which undergo change that we perceive the successive representations of the ship as irreversible. We judge this experience as change in related representations only because we attribute a rule to these representations (they always occur in a particular order). From this arise our judgments involving succession. The cinnabar example demonstrates what experience would be like if there were no such rule and there were merely change.

There is also a more straightforward reason why the principle of relative persistence is needed for our experience of succession and simultaneity. Let us first consider our experience of simultaneity. Recall that simultaneity describes how different objects of perception occupy the same extension of time. In our ship example, we assume that the ship, the stream and surroundings all coexist. In the earth and moon example, these two objects coexist. But as we have seen, the principle of relative persistence is needed in order for us to represent objects of perception as objects at all. In the example above, even if we have a momentary flash of something red and something black, Kant would argue we would not perceive the red and the black as objects because their properties would immediately change. Thus our experience of objects existing simultaneously presupposes the principle of relative persistence. We can run the same argument concerning succession. Our experience of a ship moving down stream is an experience of an object undergoing successive changes. Because the principle of relative persistence is necessary for our experience of the ship as an object, it is necessary for our experience of succession.

We now have a grasp of Kant's argument that there must be something relatively persistent if we are to experience time or its modes. But up to this point we have not discussed the principle of persistence. Recall how we distinguished the principle of relative persistence from the principle of persistence. The principle of relative persistence claims that in order to experience objects, time and time's modes, we must presuppose something which relatively persists underlying the objects of appearance. The principle of persistence claims that in order to experience objects, time and times modes, we must presuppose something which *persists eternally* underlying the objects of appearance. Kant will attempt to show that if we were merely presupposing the principle of relative persistence, that is, if we were merely presupposing that objects of perception did not persist eternally and could come into or go out of existence, then we would experience more than one time. But, he claims, to experience more than one time is "absurd," thus we must presuppose that that which underlies the objects of appearance cannot come into or go out of existence. It must persist.

2. The Principle of Absolute Persistence

We will break this section into two parts. First, we will consider why Kant argues that the relatively persistent thing that grounds our experience of time (that we considered in the last section) must persist eternally. Then, we will consider how the claim that substance persists relates to Kant's claim that the quantum of substance can neither increase nor diminish. When we consider this latter claim, we will see that Kant's argument for the claim is in the A edition as well as the B edition and that the principle of the A edition entails the principle of the B edition.

a. The Argument for Absolute Persistence

Kant's argument for the persistence of material substance turns on two important claims. The first is the claim we considered in section 1): our experience of time presupposes something that relatively persists. The second claim is that experience requires as a condition of its possibility only one time (*CPR*, A 188-189/B 232). Kant does not merely assume this latter claim, he argues for it. Kant's argument for this second claim can best be described in terms of a *reductio*. Assume 1) there is more than one time 2) all appearances are in time and 3) we experience objects (i.e., permanents) either as successive or co-existing. If there were more than one time, Kant claims, the times would be related in one of two ways. They would either "[flow] side by side" simultaneously or they would be successive. But, Kant's argues, both of these possibilities lead to an absurdity. He believes that we should grant assumptions 2 and 3, thus there cannot be more than one time.

Before we turn to Kant's *reductio* argument, we should note that while in section 1), we needed the claim that there are at least two relations in time which are succession and simultaneity, we now need the further claim that these are the *only* relations in time. But it is important to consider why he argues there are only two relations of time. We have seen that Kant refers to persistence, succession and simultaneity as modes of time in the proof for the Analogies of Experience, but only succession and simultaneity are relations in time. So why does he omit persistence here? As I noted earlier, one reason is that when Kant insists that there are only two relations in time in the First Analogy, he is concerned with the ways that two different times could be connected to one another. To say that two different times persist, Kant

would argue, is merely to say that they exist both simultaneously and eternally. Thus if he can rule out the possibility of two different times existing simultaneously, he can rule out the possibility of two different times persisting. In claiming there are only two relations of time in the First Analogy, Kant merely means that there are only two ways that we could experience two different times existing in relation to one another: simultaneously (be it persisting or merely relatively persistent) or successively. We will now consider why two different times existing in these two ways would lead to absurdities.

First, let us assume that two (or more) times were to flow side by side simultaneously. Then, according to Kant, “the appearances would then be related to two different times...which is absurd” (*CPR*, A 188-189/B 232). Why would this be absurd? Kant does not explain. His claim seems to be that this is simply not how we experience objects. If we consider what it would mean for us to presuppose two times flowing side by side, the absurdity will be apparent. Let us once again return to our ship example. When I perceive a ship moving downstream, I do not experience it as being in two different times. Here we need to make an important distinction: experiencing an object in more than one time is not the same as using more than one method to describe an object in time. Of course Kant would grant that I may use different means of describing how the ship exists in time. I might use a clock or compare its existence to my own (e.g., the ship was built before I was born), but he would argue that these are merely different methods of describing the same time. Kant believes that my experience of the ship moving downstream does not change based on the method I use to chart its temporal existence. He would say that we can show that any method we use to describe the ship temporally arises

from a more general notion of time. Any of these different descriptions of time can be interpreted as representations occurring within a single unified time.

To *experience* objects in two different times flowing side by side seems to imply something like the following: if I were to experience the ship in two different times flowing side by side, then I would have two different successive representations of the ship and two different representations of the ship existing simultaneously with other objects of perception. These two different representations would not be able to be reinterpreted as experiences occurring within a single time. Neither time would be reducible to the other nor to some third time that could be used unify the two. The absurdity seems to be that this is simply not our experience of objects in time. Our experience of time is such that all of our representations are judged as existing in a single unified time. Thus more than one time cannot exist simultaneously.

Now we will consider the possibility of different times existing successively. Assume that there is more than one time and these times are successive. The problem with this case is a bit clearer. Kant argues, "If one were to ascribe such a succession to time itself, one would have to think yet another time in which succession would be possible" (*CPR*, A 183/B 226). Let us assume that time T_1 begins at some point, say when I was born, and ends at some point, say, when I die. Time T_2 then begins. Kant argues that in this case we are already assuming another time that underlies these successive times. When we say that time T_1 begins or ends, what we mean is that it came into existence at some point in time or went out of existence at some point in time. So as soon as we introduce the notion of succession, we are assuming a time in which

that succession takes place. Now, if this underlying time were not successive, then it would serve as the unified time in which we experience objects.⁵⁸ But if the time in which we ground that succession were itself successive, then we would have to point to yet another time in which that succession were to take place. This process would continue *ad infinitum*. But this would be absurd. Thus there cannot be more than one time existing successively.

Given that it would be absurd for there to be more than one successive time or more than one simultaneous time, Kant believes that we must presuppose only one time—or as he sometimes puts the point, time is a unity (*CPR*, A 188/ B231). Once Kant has shown that time is a unity, he believes that he can show that substance persists.

As we saw in part 1, our notion of time must be grounded in something that relatively persists. If Kant is correct and there is only one time, then that relatively persistent thing which grounds time must endure through all time. If it did not, then there would have to be more than one relatively persistent thing grounding time. But Kant believes that if this were the case, then different relatively persistent things would ground different times. Since there cannot be different times, Kant believes that we must presuppose that the relatively persistent thing grounding time must exist eternally. That is to say, it must persist. Kant calls this persisting thing substance. He grants that we may presuppose more than one substance (he continually refers to substances), but he argues that we must presuppose that none of those substances can

⁵⁸ Since Kant has ruled out different times existing simultaneously, we would have to find some other explanation for why we thought successive times existed at the same time as the time which underlies them.

come into or go out of existence.⁵⁹ One might rightly argue that substances surely come out of and go into existence in some sense. For example, when an apple rots away, parts of it are going out of existence. Kant certainly recognizes this fact but he believes that this change merely affects the accidental forms that substance takes. One of the important consequences of Kant's proof is that it leads us to distinguish the modifications of accidents from the modifications of substances. He argues that the accidental forms that material substance takes (e.g., an apple) undergo "change" (*Wechsel*) while material substance itself merely undergoes "alteration" (*Veränderung*).

According to Kant, "change" involves coming into and going out of existence while "alteration" does not. In the First Analogy, Kant provides the example of burning wood to emphasize the important difference between change and alteration (*CPR*, A 185/B 228). When we burn a piece of wood, we presuppose that the substance underlying the wood which we call "matter," does not go out of existence; in Kant's terms the matter itself does not undergo any change. But we judge that the thing that alters (which Kant calls the "determination" of the matter) does go out of existence (*CPR*, A 187/B 230-231). That is, we judge that the wood goes out of existence while the smoke and ash come into existence, but we presuppose that the matter underlying the wood, smoke and ash stay the same. We must presuppose this in order to judge that the smoke and ash are related to the wood. Were we not to presuppose that the matter remains the same, we would have no reason to judge the smoke and ash as changes to

⁵⁹ One might wonder why, if there were more than one substance and substance grounds time Kant's argument does not imply that there may be more than one time. I believe that the solution to this worry is tied to the claim that the quantum of substance can neither increase nor diminish. We will consider this claim in the final section.

the wood. For Kant, persisting things can be altered, while non-persisting things can change. Thus, according to Kant, change is a modification which involves arising or perishing while alteration is a modification that does not involve arising or perishing.⁶⁰

Kant's discussion of different substances also helps clarify his argument for persistence.

He writes,

Substances (in appearance) are the substrata of all time-determinations. The arising of some of them and the perishing of others would itself remove the sole condition of the empirical unity of time, and the appearances would then be related to two different times... (*CPR*, A 188-189/B 231-232)

The idea here seems to be an application of his argument regarding what would be necessary to perceive substances as successive or co-existing. As we have seen, Kant argues that we must presuppose substance in order to experience time. Assume we experience more than one time. How could we perceive the different times? We would need something permanent against which these different times could be judged as different. But once we have some permanent backdrop against which we could judge different times, we are assuming one underlying time (the time in which that permanent backdrop exists).

We now have the argument for the persistence of substance, but before we move on we should point out another important consequence of Kant's proof. It concerns how Kant's notion of the relation of material substance and unity differs from Hume's notion (we save a detailed discussion of this topic for the final chapter). Recall that Hume argues that our idea of

⁶⁰ We will consider an important consequence of this distinction and how it relates to Hume in the next section.

material substance as a unity leads to a contradiction. He claims that when we unpack the idea of material substance, we see that it entails something that is both simple and compound.

Kant's account of material substance avoids this worry. The unity that is important for Kant's purposes is not tied to simplicity. According to Kant, unity comes into the picture because material substance, construed as that which persists, grounds our experience of a unified time and allows us to judge objects as relatively persistent through time; it allows us to treat successive representations as representations of a single object. Unity must be presupposed, but as to whether material substance, as a thing in itself, possesses unity, we cannot be sure because we have no experience of things in themselves. This unity is merely a necessary presupposition for the possibility of experience according to Kant. So while material substance grounds unity in important ways on Kant's picture, we need not posit simplicity of substance to explain this unity. Thus, Kant's notion of substance avoids Hume's criticism that substance possesses the qualities of being simple and compound.

b. The Argument that the Quantum of Substance can neither Increase nor Diminish in Nature

We will now consider what Kant means when he claims that the quantum of substance cannot increase or diminish in nature. Once we understand what Kant means, we will consider how he attempts to justify this claim. What does it mean to say that the quantum of substance can neither increase nor diminish in nature? When Kant discusses the quantum of substance, he is asserting that the persistence of substance entails that the amount or quantity of substance cannot change. As noted above, this claim about the quantum of substance relies upon a

particular notion of change. According to this notion, were we to judge *any* change to an underlying substance, we would destroy the unity of time. Kant writes,

Thus since this change concerns only the determinations that can cease or begin, we can say, in an expression that seems somewhat paradoxical, that only what persists (the substance) is altered, while that which is changeable does not suffer any alteration but rather a **change**, since some determinations cease and others begin. (*CPR*, A 187/B 230-231)

This distinction between change and alteration has important consequences for Kant's relation to Hume. Recall that according to Hume, one of the reasons our notion of substance is a fiction is because claiming substance persists entails a contradiction. We must treat substance as both that which changes and as that which stays the same. In the quote above, Kant argues that we must presuppose that substances do not change. Instead, on Kant's view, substances ground certain ways for an object to exist; substances ground the "determinations" of objects (*CPR*, A 187/B 230-231). Consider again the ship moving downstream, we must presuppose the principle of persistence but to explain the differences in our successive representations, we must also presuppose that the substance underlying the ship grounds different ways for the object of appearance (i.e., the ship) to exist. Say at T_1 we judge that the ship is at point A, at T_2 we judge that it is at point B while at point T_{50} we judge that the ship has been taken apart plank by plank. Clearly many "features" of the ship do not persist. In fact, we experience drastic modifications in our judgments. At T_1 and T_2 we judge that the ship exists in roughly the same form but its position has changed. By T_{50} we judge that its form has dramatically changed; it has changed so much that we no longer judge it to be a ship. We judge that one form (the ship) has gone out of existence and a new form, e.g., a pile of lumber, has come into existence. Kant

claims that we must presuppose that the substance has *altered* (it has not come into or gone out of existence), but the determinations of the substance, the different ways in which the substances exists, have *changed*.

Kant also uses this distinction between change and alterations to justify the claim that according to the principle of persistence, substances cannot change. He writes, "Alteration is a way of existing that succeeds another way of existing of the very same object. Hence everything that is altered is **lasting**, and only its **state changes**" (CPR, A 187/B 230). What he means is that in order to experience the world as we do, we must presuppose that all objects of perception must exist in two ways. He distinguishes the existence of substance or "subsistence"⁶¹ from the existence of accidents which he calls "inherence"⁶² (CPR, A 186/B230). We must presuppose that substances exist as unchanging things so that time remains unified. Because the underlying substance grounds our experience of time, if it were to change, Kant believes, we would have more than one time.⁶³ But objects of perception must also exhibit change in order for our notion of succession to arise. If the objects of appearance remained the same throughout all time, we could only represent them as existing simultaneously. Because we represent objects as existing successively and our experience of objects is of them changing (where "change" involves arising or perishing), they must also exist as changing entities. In order to posit both of these of the same objects, those objects must possess different forms of existence. Kant thus claims that substance is lasting but its states (the different forms that the substance can take) change. Notice

⁶¹ *Subsistenz*

⁶² *Inhärenz*

⁶³ For example, one time would exist up to the substantial change while the next time would exist after the substantial change.

that the difference between inherence and subsistence involves positing more than one form of existence. This clearly runs contrary to Hume's claim that there is only one possible form of existence, but Kant believes that this is a necessary consequence of the proof of the First Analogy.⁶⁴

Thus Kant's argument for the quantum of substance neither increasing nor diminishing can be summarized as follows: When we identify something as a substance, we imply permanence through time. That which we identify as a substance may take different forms (e.g., it may exist as wood, then smoke then ash) and thereby undergo alteration, but insofar as we identify it as a substance, we are assuming that something remains the same throughout the alteration. Were we to judge that the quantum of the underlying substance underwent change, then some substance would either have to come into existence or some would have to go out of existence, but as we saw in section 2 part a) this would destroy the unity of time. Thus Kant believes that the principle of persistence entails that quantum of substance must remain constant.

In an attempt to demonstrate that the quantum of substance does not increase or diminish, I have utilized claims that occur in both the A and B editions of the *CPR*.⁶⁵ In doing so, I believe that I have shown that Kant's different wording of the principle in the two editions amounts to roughly the same claim. Consider again the two versions of the principle:

A edition: "All appearances contain that which persists (substance) as the object itself, and that which can change as its mere determination, i.e., a way in which the object exists." (*CPR*, A 182).

⁶⁴ See Chapter 1.

⁶⁵ Whenever I use a claim that only appeared in one edition, I provide its corollary in the other edition in a footnote.

B edition: “In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature.”(CPR, B 224)

In the A edition, Kant explicitly distinguishes that which persists from that which can change. As we have seen, change involves the notion of arising or perishing. Thus that which persists can neither arise nor perish. If that which persists cannot arise or perish, then its quantum cannot change. Therefore, because Kant claims that substance cannot change in both editions, it is clear that he holds that its quantum can neither increase nor diminish. If the proof of the principle of persistence succeeds in both editions, then it follows that the quantum of substance must remain constant.

One might wonder why Kant makes this claim explicit in the B edition and not in the A edition. The reason for this may be because in between the publication of the two editions, Kant published *The Metaphysical Foundations of Natural Science*. In it, Kant attempts to prove the “*First Law of Mechanics*” which states “In all changes of corporeal nature the total quantity of matter remains the same, neither increased nor diminished” (4:541-542). To prove this principle, Kant appeals to the proof of the First Analogy. Kant may have felt the need to make the consequences of his proof more explicit, given that he utilizes those consequences in *MFNS*.

We now have an understanding of Kant’s proof of the principle of persistence. In examining the proof, we gestured toward some of the ways that our explication differed from other authors’ explications. In the next chapter, we consider (in much greater detail) how our understanding of the proof differs from those of other commentators, why these differences are

important and consider why our reading is preferable to theirs. In doing so, we will consider several supposed problems with Kant's proof and attempt to save Kant from those difficulties.

Chapter 4: Possible Problems with the Proof of the Principle of Persistence

In this chapter, we will consider several possible problems with Kant's First Analogy. Hume will be largely absent from our discussion but we will return to an examination of the relationship between Kant and Hume in chapter 5.⁶⁶ We will break this chapter into three sections. In section I, we will consider one of the most common criticisms of Kant's proof. Critics claim that Kant's proof only demonstrates that we need something relatively permanent (something that endures for some period of time) in order to determine temporal magnitude. Some hold that Kant's proof does not justify the claim that we must have something absolutely permanent (something that endures for all time). The argument claims that that even if we grant Kant the basic assumptions necessary for his proof, he still does not show that absolute permanence is necessary. In section II, we will consider the claim that Kant's proof is trivial because it relies on a definitional trick: Kant defines substance as that which is absolutely permanent, and then attempts to show "In all change of appearances substance persists" (*CPR*, B 224). That is, some critics claim that Kant assumes that substance absolutely persists in order to show that substance persists through change. Finally, in section III, we will consider a potential problem with our reading of the First Analogy. We treat the First Analogy as proof of substance in general. Given the language and examples Kant employs, we might think the First Analogy is a proof of material substance. Thus we will examine why we are justified in reading the First Analogy as a proof the necessity of the concept of substance in general.

⁶⁶ Specifically, we will examine whether or not Hume should grant Kant the basic assumptions he needs for the proof of the First Analogy to work.

I. The Move from Relative Persistence to Absolute Persistence

As noted above, in this first section, we consider the claim that Kant's move from relative persistence to absolute persistence is illegitimate. We break this section into two parts. First, we examine a general version of the argument. After explaining how the argument is supposed to work and noting some variations on the argument, we examine certain features of the interpretation of the First Analogy that we considered in the last chapter. In doing so, we see that most of these critiques miss the mark because they ignore one of the fundamental claims of the First Analogy: the claim that time is a unity.

In part B, we turn to a particularly interesting version of this criticism that Arthur Melnick advances in his book *Kant's Analogies of Experience*. Melnick's version differs from the general version in that it relies upon a very different reading of the First Analogy and Melnick does not ignore Kant's claim that time is a unity. We see that if we accept Melnick's reading of the First Analogy, then Kant is making an illegitimate move from relative persistence to absolute persistence. However, there are good reasons for rejecting Melnick's reading.

A. The General Version of the Criticism

Critics concede that Kant may be correct when he claims that we must presuppose an underlying substratum that remains the same in order to perceive change. However some critics, most notably Jonathan Bennett, point out that, here, the substratum should be thought of as the bearer of properties, not as that which persists eternally. That is, there must be something which brings rise to perceptual qualities and remains unchanged as those perceptual qualities

change. As we saw in the last chapter, Kant uses the terms “change”⁶⁷ and “alteration”⁶⁸ quite differently (*CPR*, A 187/B 230). “Change” refers to a thing coming into or going out of existence, while “alteration” describes a modification of a thing that remains in existence. The substratum, Kant claims, undergoes alteration, while properties to which it gives rise change (come into and go out of existence). The substratum does not change; it serves as a backdrop against which we can perceive change. As we have seen, Kant argues that the perception of change is necessary for our determination of time, so we can argue that the possibility of time determination ensures that there must be some substratum underlying objects of appearance. We call this substratum substance. Many critics hold that up to this point, Kant’s argument is valid. But, they argue, even if we grant Kant the notion of a thing that endures unchanged through some change of its properties, we need not grant the further claim that substance is absolutely permanent (that it persists through *all time*).⁶⁹

Critics claim that all Kant has shown up to this point is that there must be at least a relative permanent if we are to perceive change. They therefore hold that the notion of substance that Kant employs up to this point does not justify his further claim that substance must persist absolutely.⁷⁰ To get this further conclusion, they argue, Kant smuggles in a second notion of substance that he merely defines as that which persists absolutely. Thus, Kant’s

⁶⁷ *Wechsel*

⁶⁸ *Veränderung*

⁶⁹ Dryer, pp. 366-367; Bennett, pp.181-197; and Van Cleve, pp. 107-108 each present an argument in this vein.

⁷⁰ Van Cleve is an exception. He does not grant Kant that substance must be *relatively* permanent. He argues that if we concede to Kant that substance is relatively permanent and all change in appearance is an alteration of that relatively permanent substance, Kant would have all that he needs to prove the absolute permanence of substance (pp. 108-111).

argument trades on an ambiguity. It is successful only because he moves from one concept of substance (substance as a relative permanent bearer of properties) to another (substance as that which persists absolutely), though he never provides any justification for this move.

As one might assume, given our reading of the First Analogy in chapter 3, the problem with arguments like this is that they do not recognize the role that the unity of time plays in the First Analogy. If we grant Kant's assumption that a relatively permanent substratum is necessary for the determination of time, and therefore posit that this substratum could itself come into and go out of existence, we would be left with a problem: when a particular substratum ceased existing, then that substratum could no longer serve as the necessary backdrop to perceive change and therefore determine time. Assuming a new substratum could come into existence (providing us with the needed backdrop for perceiving change), we would have a different means of determining time. As we saw in chapter three, Kant claims that substance cannot undergo change (where a change involves something coming into or going out of existence), only the properties the substance gives rise to can change. Substances themselves merely undergo alteration. Kant claims if we assume substances come into and go out of existence (if we assume they change rather than merely undergo alteration) then we are faced with two possibilities. In the first case, one relatively permanent substance ceases to exist and another comes into being. In this case the two substances exist successively. Kant argues that such succession would ensure that one means of determining time would cease and a new means would arise. Thus two different times would exist successively. As we saw in the last chapter, he thinks this is absurd because this is simply not how we experience time. The second

possibility is that one substratum arises while another substratum exists. In this case, we would have two different means of determining time that flowed side by side simultaneously. Again Kant argues that this is not how we experience time, so we must posit substance as an absolute permanent. In both of the above cases, treating substance as a merely relative permanent would lead to the experience of more than one time. But as we saw in the last chapter, Kant is quite clear that there is only one time.

Thus the general version of the critique misses the mark. We saw in the last chapter that Kant's argument does move from a notion of relative persistence to absolute persistence. However, Kant does not merely assume the absolute persistence of substance, he argues for it. He recognizes that an appeal to merely relative persistence cannot solve the problem he seeks to solve. For the criticism to have bite, one would have to show that it would be possible to experience time in the way that we do (experiencing a single time) while assuming that that which gives rise to our experience of time could come into and go out of existence. Because these criticisms fail to do so, there is no reason to think that Kant is in trouble here.

1. Van Cleve's Criticisms

James Van Cleve posits an argument much like general version we have considered, but he addresses the role that some defenders of Kant have attached to the unity of time. He writes,

I take the unity of time to consist in this: all events belong to one connected temporal order, which means that any two events are such that either one begins before the other or they are simultaneous. I cannot myself see any reason why the absence of permanent things would lead to the disunity of time. (Van Cleve, p. 108)

Unfortunately, Van Cleve does not give us much to work with in this quote. Nor does he expand on his criticism. If we take Kant's following two claims seriously, 1) that there is only one time and 2) that there must be something unchanging against which we can perceive change, then there is good reason to believe that the absence of absolutely permanent things would lead to the disunity of time. If we were to assume *only* relatively permanent things serving as the needed backdrop, then each of those relatively permanent things would serve as a different representation of time in which we could determine temporal magnitude. We would then need some further unchanging underlying substratum that would link these different representations together (placing them in a single time), otherwise we would have more than one time. Thus, without assuming the absolutely permanent substratum, the unity of time would be destroyed.⁷¹ Van Cleve seems to suggest that we could construct a unified timeline using only relatively permanent things, but he does not fill in the details. Since a) he does not demonstrate how the unity of time could be maintained and b) he does not give us any reason to reject Kant's two claims from above, his criticism does not seem very problematic for Kant.⁷²

⁷¹ This is not to say that relatively permanent things cannot serve as a backdrop against which we can perceive change. Kant would certainly grant this claim. Relatively permanent objects can be used to recognize change and determine temporal duration (e.g., I can use a clock to determine the duration between two events). But the First Analogy is not merely concerned with how a specific temporal duration is determined. It is concerned with how *all* time-determination is possible. We will consider the difference between these two claims in greater detail in section C.

⁷² In his book, *Kant's Analogies of Experience*, Arthur Melnick attempts to provide a way of maintaining the unity of time while using only relatively permanent substrata as our backdrop. We will consider his attempt and why it fails in the next section.

2. Van Cleve's Second Criticism

Van Cleve also expresses another related worry. Unlike the worry above, Van Cleve here grants Kant that we need an absolutely permanent backdrop for the sake of argument. He contends that even if we grant Kant this we must ask,

why would changes have to be alterations *in it*. What the argument proves at most is that every change takes place against a backdrop of something permanent, but it does not prove that any change is an alteration *in* that permanent something, or even that it is an alteration of anything in all.

Let the sun be hung as permanent backdrop in the sky: things under the sun are still free to pop into and out of existence as they please, violating the maxims *gigni de nihilo* and *in nihilum nil posse reverti*. Yet it is clear that Kant wants to vindicate these ancient principles (see A 186/B 229). For this purpose, the Backdrop Argument is seriously wanting. (p. 108)

The first thing that we should note is that, again, Van Cleve does not provide very much information. Before criticizing Van Cleve's argument, we will attempt to clarify a few important points. Assume as he does that the sun in the sky is the permanent backdrop. What, on this view, are the things under the sun? Van Cleve grants Kant the definition of substance as that which is absolutely permanent. Thus, we will reserve the term "substance" for the absolutely permanent. Then the things under the sun that we perceive like rocks and trees should not be dubbed "substances" in the Kantian sense because they are able to "pop" in and out of existence. If these things are not absolutely permanent, then seemingly they must inhere in something that is at least relatively permanent. Otherwise how would we perceive them as objects at all? As we have seen, if objects of perception did not inhere in something at least relatively permanent, their properties would change constantly and we would not be able to perceive them as objects. If these objects inhere in something relatively permanent, we should

then consider whether the things in which they inhere also go out of existence. Seemingly they must on Van Cleve's account. Otherwise they could serve as the necessary permanent backdrop and we would not need to use the sun. Thus Van Cleve's argument assumes that the sun is a necessary permanent and all the things under the sun inhere in that which is relatively permanent. According to this picture then, the alterations of perceptual objects occur in the relatively permanent, not in the absolutely permanent. Van Cleve argues that we would have the necessary backdrop that Kant's proof requires but we need not grant his claims about inherence, change, and alteration.

Recall that Kant claims that we must *assume* the existence of material substance. Material substance is not an object of perception on the Kantian account. Van Cleve uses something that we can perceive (the sun in the sky) as that which serves as the permanent backdrop. But, for Kant, the backdrop against which we perceive change is not itself an object of perception. It is instead an experiential necessity. To think of it as an object of perception misses Kant's point. It is strange that Van Cleve presents this case because only three paragraphs earlier he clearly recognizes that the backdrop is not an object of perception. He writes, "We do not perceive the matter that undergoes transformation from wood to ashes or from caterpillar to butterfly; we only conceive of it" (Van Cleve, p. 107). The point we must press here is that the permanent substratum is not, for Kant, an object of perception but rather something that must be assumed in order for time determination to be possible. One reason Van Cleve's second criticism fails is because he fails to recognize the role of the assumed substratum in determining change. We will now examine why Van Cleve's criticism is unfounded in further detail.

Van Cleve's second criticism can be summarized in the following way:

1. For the purposes of this argument, we may grant Kant that we must have something absolutely permanent to perceive change.
2. As long as we have something absolutely permanent, it can serve as the backdrop whether or not the changes are in it.
3. Thus, the changes need not be changes in the absolutely permanent thing.

While I believe this is a fair reconstruction of Van Cleve's criticism, Van Cleve misrepresents how Kant structures the argument in the First Analogy. We will see that the structure of Kant's argument is extremely important and by carefully considering how Kant structures his proof, we can eliminate Van Cleve's worry.

What is wrong with Van Cleve's example and the way he presents Kant's argument? Even if the case were as Van Cleve describes it, such that the things under the sun "pop" into and out of existence, we would not *experience* these things as popping into and out of existence. In order to experience these things as objects, we would have to assume at least relative permanence. If we experienced these relatively permanent things as popping in and out of existence there would be nothing to tie our objects of experience together. If we experienced wood as popping out of existence and ash popping into existence there would be nothing to tie the wood to the ash. If parts of the wood popped out of existence at T_1 , what would tie the wood at T_1 to the wood at T_2 ? On Van Cleve's account the sun would have to play this role. But how could the sun serve this function? How could a perceptual constant like the sun lead us to experience the wood at T_1 and the wood at T_2 as the same object undergoing alteration? Van Cleve does not provide us with an answer. As we saw in the last chapter, if we had nothing to

tie our perceptions of an object together, we would not experience that thing as an object at all. However, if we assume there is an underlying substratum tying the wood to the ash, then we have an explanation for why we treat the wood and ash as states of the same object. Thus for Van Cleve's second criticism to have any bite, he would have to explain how the sun could tie the different states of an object together.

Kant's response to Van Cleve clearly turns on the notions of alteration and change we noted above. This is a distinction of which Van Cleve is well aware. As Van Cleve describes the difference,

[T]o change is to come into being or go out of being, and to alter is to acquire or lose a property. Kant would say that when an autumn leaf turns from green to gold, the colors change and the leaf alters. (Van Cleve, p. 107)

Combining Van Cleve's two examples, assume the sun in the sky is permanent and that whenever a leaf exhibits a different shade of color one leaf goes out of existence and a new leaf comes into existence. This is where the structure of Kant's argument becomes so important. While it is true that Kant argues that we must assume something absolutely permanent, if we are to perceive change, there is an important reason why accidents must inhere in that permanent thing. Van Cleve misses this point. Kant's argument is more intricate than Van Cleve allows. Kant would say that in order to experience a leaf as an object we must assume an underlying substratum linking the gold leaf to the green leaf. The substratum is necessary to perceive objects *at all*. If we were unable to perceive the leaf as an object, then we certainly could not perceive it changing color. This is why the changes must be in the substratum. The sun, in Van Cleve's example, is a red herring. Only after Kant has shown that the substratum is

necessary for the perception of change does he make the move to demonstrating that the substratum must also be permanent (so as not to destroy the unity of time). Kant, therefore, has a very good reason for asserting that the change must be alterations in a substratum.

Consider again Van Cleve's example,

Let the sun be hung as permanent backdrop in the sky: things under the sun are still free to pop into and out of existence as they please, violating the maxims *gigni de nihilo* and *in nihilum nil posse reverti*. Yet it is clear that Kant wants to vindicate these ancient principles (see A 186/B 229). (Van Cleve, p. 108)

Van Cleve hints that Kant's goal in positing inherence in substance is to vindicate the ancient principles *Gigni de nihilo nihilo, in nihilum nil posse reverti*.⁷³ This misrepresents why Kant turns to the distinction between alteration and change. He is not merely looking to vindicate ancient principles. He argues that there must be a difference between alteration and change in order for us to perceive objects at all. One interesting consequence of his proof is that his argument supports the principles. Once the structure of Kant's argument is clear, we may dismiss Van Cleve's worry.

B. The Melnick Version

We now turn to another version of the general argument put forth by Arthur Melnick. This version is related to Van Cleve's version because Melnick, too, believes that we could construct a unified time using only relatively permanent substrata. But Melnick's version differs in that he actually provides an account of how to structure such a timeline.

⁷³ Nothing is brought forth from nothing and nothing reverts to nothing.

Melnick advances a particularly interesting version of this criticism in his book *Kant's Analogies of Experience*. The force of Melnick's attack comes from a reading of the proof of the First Analogy that is quite different from the reading we considered in chapter three. Melnick's version is important for our purposes for several reasons. First, Melnick's interpretation is well recognized and continues to be quite influential.⁷⁴ Given how different it is from the interpretation we considered in the last chapter, we should provide some justification for accepting our reading and rejecting his. In examining his version of the worry and considering the reading of the First Analogy from which it is derived, we see that there are good reasons for rejecting his interpretation of the First Analogy and embracing the version we considered in the last chapter. Second, in responding to Melnick's critique we can highlight important features of the proof of the First Analogy. That is, this examination provides a clearer picture of what Kant argues in the First Analogy. Finally, Melnick's reading of the First Analogy points to a general principle that we must keep in mind when interpreting the Analogies: though each of the Analogies is importantly related to the others, we must be wary of what we take from the other Analogies when interpreting an Analogy. Kant separates the Analogies for a reason and relying too heavily on features *only* found in the other Analogies may lead to a problematic interpretation.

Melnick's version of the criticism is found in a section on the First Analogy entitled, "The Argument from Temporal Magnitude." This argument involves a misreading of the First Analogy which makes it seem as though Kant illicitly moves from the relative persistence of

⁷⁴ Jill Vance Buroker's section on the First Analogy in her book *Kant's Critique of Pure Reason: An Introduction* is an example of a recent work that relies heavily on Melnick's reading.

material substance to absolute persistence. Once we recognize how Melnick's interpretation is flawed, we will see that we can defend Kant from Melnick's version of the worry.⁷⁵

1. Melnick's Interpretation of the First Analogy

It is important to note from the outset that while Melnick's explication of the "The Argument from Temporal Magnitude" is quite interesting, it does not make use of much of the First Analogy. Melnick utilizes some passages from the First Analogy but he also relies heavily on a few passages from the rest of the *CPR* to form his argument. Before we turn to Melnick's reading, we will highlight a few important features of his understanding of the temporal magnitude argument.

Melnick begins with a discussion of what Kant is attempting to prove in the First Analogy. He writes: "The First Analogy is concerned with the general possibility of determining time magnitude; i.e., determining the lapse of time between events, and determining how long an object remains in a certain state."⁷⁶ The general strategy, as Melnick understands it, is to show that material substance must persist in order to determine the time interval between two perceptions, if those two perceptions are interrupted.⁷⁷ According to Melnick's reading, Kant attempts to show that that which serves as the substratum for the determination of temporal

⁷⁵ In his book, Melnick argues that the proof of the First Analogy is actually two proofs. He calls the first proof, "The Argument from Temporal Magnitude" and dubs the second proof "The Argument from Empirical Verifiability." He claims that neither proof leads to the conclusion that we must presuppose an absolutely permanent underlying substratum. We will focus on Melnick's argument from temporal magnitude because this argument involves a misreading of the First Analogy which makes it seem as though Kant illicitly moves from the relative permanence of material substance to absolute permanence. We will see that we can solve Melnick's problem without ever turning to the verifiability argument.

⁷⁶ In the next section, we will see that this claim is problematic.

⁷⁷ We will consider this in greater detail momentarily.

magnitude must be absolutely permanent and, given that material substance is defined as that which persists absolutely, material substance serves as the substratum for the determination of temporal magnitude.

Melnick highlights a passage near the end of the First Analogy that he believes plays a crucial role in understanding Kant's proof. In the final paragraph of the First Analogy, Kant writes,

Persistence is accordingly a necessary condition under which alone appearances, as things or objects, are determinable in a possible experience. As to the *empirical criterion* of this necessary persistence and with it of the substantiality of appearances, however, what follows will give us the opportunity to note what is necessary. (CPR, A 189/B 232, my emphasis)

Melnick believes that before one can properly understand the proof of the First Analogy, one must know what the empirical criterion of material substance is. He correctly points out that Kant does not provide the empirical criterion in the First Analogy. When Kant writes, "what follows will give us the opportunity to note what is necessary," he is referring to what follows in the Second Analogy. The empirical criterion of material substance refers to that through which we are acquainted with material substance in experience. As we have seen, that which persists absolutely is not a possible object of perception. Instead, on Kant's view, we are acquainted with something (the empirical criterion) in experience that allows us to infer that something absolutely permanent must be present. In the Second Analogy, Kant explains that the empirical criterion of substance is action (*Handlung*) such that we can "infer directly" from action to the persistence of that which acts (CPR, A 205/B 250). Kant further argues, the concept of causality "leads to the concept of action" (CPR, A 204/B 249). He provides a clearer

explanation of what this means in the *Polegomena*. There he argues that within the realm of the appearances, every effect is an event or an occurrence in time (4:343). This effect must be preceded by a cause.⁷⁸ That is to say, the succession from cause to effect is a case of objective succession. Like the example of the ship moving downstream that we considered in the last chapter, the order of succession in the case of cause and effect is fixed. Kant claims that the cause must have “begun to act” in order for there to be an effect. The concept of action (which he sometimes calls a happening or occurrence) is what ties the concept of cause to that of effect (*Polegomena*, 4:343-4:344). For Kant, whenever we perceive an action, that action necessarily involves cause and effect. Moving from cause to effect indicates temporal succession. But in order for there to be temporal succession, there must be some constant that allows us to link the successive moments in a single time. Thus the temporal succession indicated by cause and effect leads us to infer the existence of a substratum which remains the same through all change, allowing us to experience change. This substratum, as we know from the First Analogy, is substance. Thus, action leads us to the concept of material substance. Kant explains this in *CPR* when he writes,

Action...signifies the relation of the subject of causality to the effect. Now since all effect consists in that which happens, consequently in the changeable, which indicates succession in time, the ultimate subject of the changeable is therefore that which persists, as the substratum of everything that changes, i.e., the substance. (*CPR*, A 205/B 250)

⁷⁸ Kant argues this is true, even if there is no lapse in time between the cause and the effect. For example, he claims that though a ball lying on a pillow causes a dent in the pillow, the cause and effect are simultaneous. Kant argues that order here is still important for the effect would not have arisen if not for the cause. So while there is no lapse in time between the ball resting on the pillow and the dent occurring, we still place the cause before the effect (A203/B 248).

While a great deal more could be said about this issue, what is important for Melnick's purposes is that the empirical criterion of substance is action.

Melnick next considers the following two important features of substance and their relation to one another: 1) Only substance (defined as absolutely permanent) can serve as the substratum for a temporal magnitude and 2) action is the empirical criterion of substance (Melnick 1974, p.64). He argues that the relation between these two claims is important for understanding the First Analogy. According to Melnick, the relation between the two is such that,

Only if we take action as a criterion of substance can action serve as the basis for the determination of temporal magnitude. In other words, only if actions are taken to be actions of what persists through the action can we determine time magnitude on the basis of the action. (Melnick 1974, p.64)

Melnick uses an example to show why, in determining temporal duration, we must treat actions as *actions of that which persists*. Assume you are looking at a clock that reads 4:00 am at time t_1 . At time t_2 it reads 4:05 am. In this case, the duration is measured by how long "it takes for the action...to move the hands from a 4:00 reading to a 4:05 reading" (Melnick 1974, p.66). Now suppose that the clock does not persist. Suppose its existence is interrupted such that after t_1 the clock goes out of existence at some time, call it t' . At some time before t_2 , say t'' , it reappears and at t_2 it reads 4:05. Now in order to determine the time between t_1 and t_2 , we must be able to determine the time between t' and t'' . Reading the clock face right before it goes out of existence and immediately after it reappears will not suffice because it is not the position of the hands that determines the duration. Instead, it is the action of the hand moving around the clock, and we do not have access to that action in the interval between t' and t'' (Melnick 1974, p.66). Thus,

Melnick argues, we have reason to believe that if something is to serve as a means of determining the magnitude of some time interval, then that thing must persist uninterrupted through that interval.

Notice, we still have not made the move from relative persistence (a thing must endure for some period of time) to absolute persistence (a thing must endure through all time). Currently, we only have an argument for the claim that something must persist for as long as it is used to determine a temporal interval. To move to absolute persistence, Melnick believes that Kant's First Analogy relies on the following claim, which I will call M_1 .

M_1 : If a substance is employed as a substratum for the determination of the magnitude of any time interval, then that substance is (or ought to be) employed as a substratum for the determination of the magnitude of *all* time intervals. (Melnick 1974, p.67)

M_1 says that if we assume some underlying substratum as being relatively persistent in order to determine some period of time, then we should treat that underlying substratum as absolutely persistent. Melnick then examines why we might hold M_1 to be true. One interesting way in which Melnick's version of the criticism differs from the general version we considered above is that Melnick recognizes the role that the unity of time is supposed to play in Kant's argument. He emphasizes Kant's claim that if there were more than one determination of time, then the empirical unity of time would be destroyed (*CPR*, A 188/B 231). To explain how positing the unity of time might lead us to accept M_1 , Melnick uses the following figure.

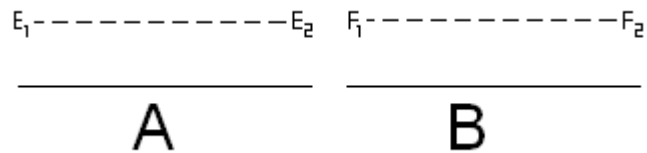


Figure 1

In the figure, A and B denote actions of that which persists (substances) that we use to determine temporal duration. The solid line above them represents when they are used to determine temporal duration. E_1 , E_2 , F_1 and F_2 represent different events. The interval between E_1 and E_2 is marked by the broken line connecting the events as is the interval between F_1 and F_2 . Melnick notes that we could use action A to determine the interval between E_1 and E_2 and action B to determine the interval between F_1 and F_2 , but there would be no way of determining the duration between E_1 and F_1 (or any event E and any event F). Thus, the empirical unity of time would be destroyed. So if we are to use something to determine temporal duration it had better serve to determine *all* temporal duration. Thus we should accept M_1 .

2. Melnick's Criticism of Kant

Melnick then attempts to show that while it might be tempting to accept M_1 on the basis of the previous argument, we could maintain the empirical unity of time even if the substance we presuppose is not absolutely permanent. Thus, he will attempt to show that while M_1 seems initially plausible, we are not justified in positing it. To demonstrate the problem with M_1 , he provides the following figure:

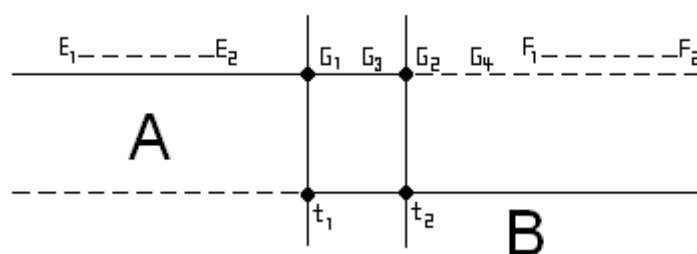


Figure 2

Again, A and B are supposed to be actions of that which persists, which we use to determine temporal duration. The solid line above them denotes when they are used to determine temporal duration, the broken line to the left of t_1 denotes a time before B is used to determine temporal duration and the broken line to the right of G_2 denotes a time when A is no longer used to determine temporal duration. G_1 - G_4 are events like the F's and E's and the solid line between t_1 and t_2 denotes a specific interval of time in which action A is correlated with action B.⁷⁹

Melnick provides us with specific examples to help fill out the picture. Consider action A the motion of a pendulum, while action B is the position of the earth as it revolves around the sun. He writes,

The correlation of B with A would involve, say, if the earth moves X miles in the time it takes the pendulum to complete y movements, then the earth moves nx miles in the time it takes the pendulum to complete ny movements. It seems that in this way, the interval between E_2 and F_1 can be determined by adding the interval between E_2 and G_2 (as determined by A) to the interval between G_2 and F_1 (as determined by B). (Melnick 1974, p.67)

⁷⁹ While Melnick provides some details concerning figure 2, he leaves much of the work deciphering the figure to the reader. It is not clear why G_1 - G_4 do not have broken lines representing interval between them.

He holds that if this were the case, then we would seemingly have a unified time because we have a means of determining the temporal duration between any of the events that occur. We could do this even though we did not use the same action to determine that duration. Melnick believes that this demonstrates that we should reject M_1 and that substances could come into or go out of existence without destroying the empirical unity of time.

Melnick notes that the situation might be a bit more problematic than as he initially describes. One might think that it is not enough that A and B are correlated at t_1 - t_2 . They would also have to remain correlated after t_2 . Why? Assume they did not remain correlated such that the pendulum completes 10 movements between G_2 and G_4 and 10 movements between G_4 and F_1 , but the earth moves 10 miles between G_2 and G_4 and 20 miles between G_4 and F_1 . If this were the case, then the empirical unity of time would be destroyed, because we would have two different (and incompatible) means of determining the time interval. That is, if they did not remain correlated and we continued to use A to determine the temporal duration between events while also being able to use B to determine temporal duration between events, the empirical unity of time would be destroyed because these two means of determining temporal duration would yield conflicting results. But Melnick argues that this only arises *if we continue to utilize A as a means of time determination once we begin to utilize B*. If we reject A as that which determines temporal duration before t_2 and move from A to B while the two actions are correlated (and he argues we might have pragmatic reasons for doing so), then, he believes, we could maintain the empirical unity of time even though we use two different actions to determine the temporal duration.

Because two different actions of that which persist could be used to determine the intervals between each and every event, Melnick believes that this shows that it is possible for substance to go out of existence or come into existence without destroying the unity of time. As long as a second substance comes into existence before the first goes out of existence and the two actions are correlated while the substances co-exist, he believes that the empirical unity of time would not be destroyed.

3. A Defense of Kant

There is something fundamentally wrong with Melnick's approach. The problem arises from two important aspects of Melnick's interpretation. Recall that Melnick believes, "The First Analogy is concerned with the general possibility of determining time magnitude; i.e., determining the lapse of time between events, and determining how long an object remains in a certain state" (Melnick 1974, p.58). As Henry Allison points out, Melnick incorrectly identifies the goal of the First Analogy. Kant does not merely seek to demonstrate that in order to determine temporal magnitude, we rely on the concept of a permanent substratum. The determination of temporal magnitude plays a fundamental role in the proof of the First Analogy, but what Kant seeks to show in the First Analogy is that a permanent substratum is necessary condition of *all* time-determination (Allison 2004, p.236, footnote 8). To emphasize how this differs from Melnick's interpretation, consider the following. Kant is not merely asking how we measure durations, but rather, as one scholar notes, "how can there be any durations for us to measure, how can we be aware of the changes that involve objective succession and simultaneity" (Paton, p. 196).

Interpreting the goal of the First Analogy as Melnick does leads to two closely related problems in his explication of the proof. The first difficulty relates to the examples Melnick provides in his argument. Melnick's argument relies heavily on the role of action in determining temporal duration. Because of this, he turns to examples of physical objects to show how we can determine temporal duration. He considers the actions of the movements of a hand on a clock face, the movement of the earth and the movement of a pendulum. It is true that all of these help us determine temporal duration. If that were all that Kant sought to show, then an appeal to relative persistence would suffice. But, as we saw when we considered Van Cleve's second objection, to use examples like these misses Kant's point. Graham Bird correctly notes that it is a mistake "to reinterpret Kant's argument as if it relied upon an empirical appeal to physical objects, clocks, chronometers, quartz crystals and the like, to *measure* the passage of time" (Bird, p. 450). Kant does not use any examples like these in the proof. His proof is quite abstract and while it is tempting to try to make the proof more concrete by turning to physical objects, we must be cautious when employing such examples.⁸⁰ By employing these examples in describing the First Analogy, Melnick makes it appear that the proof of First Analogy relies heavily on the empirical criterion of persistence. But the argument does not depend on examples like these and that is why Kant does not discuss the empirical criterion of persistence within the proof. Instead, he leaves the discussion of the empirical criterion to the Second Analogy. While the Analogies of Experience are certainly closely related, Kant does separate them. We should not

⁸⁰ Kant does use the example of burning wood, but only to exemplify what he means by alteration. It is not used to reference the empirical criterion of material substance.

take claims Kant makes about persistence in the other Analogies and make them central to the proof of the First Analogy. If they were central claims, they would appear in the First Analogy.

The second problem with Melnick's interpretation also arises from his focus on action as the empirical criterion of substance. Though Melnick believes that the role of the empirical criterion is of paramount importance, he does not seem to properly recognize its role. Melnick is correct in asserting that Kant would argue that the movement of the earth or the pendulum could serve as the empirical criterion for substance. That is, we could infer that something persists, in some sense of persistence, throughout both of these actions. But he is wrong to hold that we must only assume something which persists through *each* action. Even using his example, we must assume something that persists through *both* actions. This underlying persisting thing is what allows for the possibility of the two actions being correlated in the way Melnick describes. Only if we presuppose that there is something that persists through both of these actions (a substance), could we correlate these two actions. As Melnick presents his examples, there is no such underlying substratum. His example assumes only that something persists through the movement of the pendulum and something persists through the movement of the earth. Though he relies upon the underlying substratum (in order to correlate the two actions), he is unaware that he is doing so. This leads him to argue that we need only relatively permanent substances.

To put the point a slightly different way, using Melnick's argument, we could determine the interval of any of the events, even if A were to go out of existence at t_2 . This leads him to argue that we only need relatively permanent substances (things persisting through the actions)

that are correlated for some period in order to maintain the unity of time. But notice what occurs when we focus on the role the empirical criteria for substance rather the role of material substance itself: we fail to recognize that both the movement of the pendulum and the movement of the earth are located in a single time. That is, our experience is of a single time in which both of these actions take place (this is why the two actions can be correlated). It is this single time in which actions take place and temporal duration can be determined that Kant is concerned within the First Analogy. Melnick's figure 2 is misleading. The figure should look something like this:

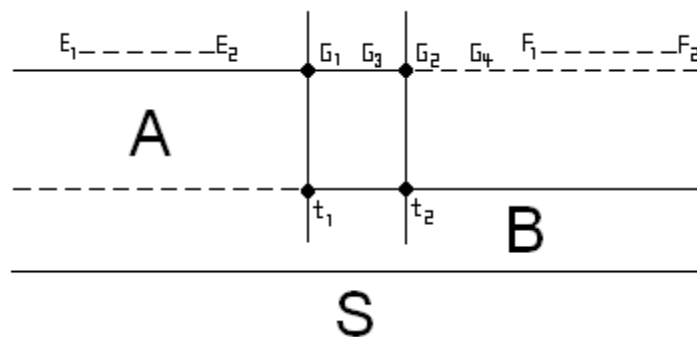


Figure 3

In order to be able to use the movement of the pendulum or of the earth (or of the hands on a clock face) to determine temporal duration, Kant argues there must a single time in which these actions can be placed. As Melnick sets it up, we start by using the movement of a pendulum and then turn to using the movement of the earth in order to determine the intervals between any events. But we use these different means successively. Thus if they are to be correlated, they too must be placed within a single time. But this assumes an underlying substratum (S in the figure above) that endures through all change.

Here the difference between interpreting the First Analogy as an attempt to show that 1) material substance is necessary to determine some duration in time and 2) material substance is necessary for all time-determination becomes more evident. An absolutely permanent substratum (i.e., substance) is necessary for all time-determination. Without time-determination in general, it would be impossible to determine any temporal magnitude. Thus, there is good reason to reject both Melnick's reading of the First Analogy as well as his version of claim that Kant's move from relative persistence to absolute persistence is illegitimate. In attempting to refute Kant's proof, Melnick unknowingly assumes a single time which requires absolute permanence.

II. Is Kant Proof Trivial and do the Principles of the Two Editions Really Express the Same Rule?

The next criticism we consider concerns how Kant describes the principle of persistence in the B edition of the text. Some claim that the way Kant expresses the principle in the B edition, coupled with the claims he makes about material substance within the proof, render his proof trivial. This, in turn, may lead us to conclude that the principle of the A edition and the principle of the B edition do not express the same rule. The principle of A edition, some critics claim, is non-trivial while the principle in the B edition is trivial.

Recall that the principle in the B edition is:

In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature. (*CPR*, B 224)

However, in proving the First Analogy, Kant claims: "In fact, the proposition that substance persists is tautological" (*CPR*, A 184/B228). As we saw in the last chapter, the thought behind

this latter claim seems to be that claiming substance persists is akin to the proposition: that which persists, persists. Critics argue that the way Kant presents the principle in the B edition is problematic because the first half of the proposition (i.e., in all change of appearances substance persists) merely follows by definition. They claim that if we define substance as that which persists, at least the first half of the principle of the B edition necessarily follows. As Jonathan Bennett writes, “This puts up for proof the same thing that, three pages later, Kant calls tautological” (Bennett, p.183).

Critics find this problematic in part because Kant is intent on *proving* both halves of the principle. He seeks to show both that substance persists through all change of appearance *and* that its quantum in nature neither increases nor diminishes. Furthermore, the proof is supposed to be a synthetic proof. If the first half of the principle followed by definition, Kant’s proof of it (i.e., the first half) would be analytic (i.e., the truth of the principle of persistence would follow necessarily from the concepts involved). Critics claim that if Kant’s proof relies on this definitional trick, at least the first half of the principle would be trivial.

To remove this worry, some have thought it is better to simply reject the principle of the B edition in favor of the A edition.⁸¹ The principle in the A edition states:

All appearances contain that which persists (**substance**) as the object itself, and that which can change as its mere determination, i.e., a way in which the object exists. (CPR, A 182)

Critics note that though Kant here equates persistence with substance, he is not setting out to *prove* that substance persists like he appears to in the B edition principle. Since the principle of

⁸¹ For example, Bennett argues that the principle of the B edition, like many of Kant’s additions to the text “is better ignored” (p.183).

the A edition does not seem to follow analytically, some argue that it should be treated as the true expression of Kant's principle.

Notice an important implication of this criticism: Unless the second half of Kant's principle in the B edition (i.e., substance's quantum in nature neither increases nor diminishes) expresses everything contained in the principle of the A edition, the two principles should not be thought to express the same rule. In the last chapter, we argued that the principles do, in fact, express the same rule, so we must now examine the relationship between the principle in the B edition and Kant's claim that the proposition that substance persists is tautological.

The first thing that we must note is that the first half of the principle in the B edition is not 1) "Substance persists" but rather 2) "*In all change of appearance substance persists*" (CPR, B 224, my emphasis). While 1) is clearly tautologically true given Kant's definitions, 2) is not. As we have seen, given what Kant proves in the First Analogy, the first half of the principle might be more clearly expressed by the following: In all change of appearance, there is substance (that which persists). What justification do we have for treating this modified version as what Kant seeks to express in the B edition? We need only consider some of the features of Kant proof in the First Analogy. Recall the general structure of Kant's proof. He attempts to show that in order to perceive objects, we must assume some underlying substratum that allows us to treat changing representations as representations of an object. He then attempts to prove that this underlying substratum must persist (eternally). Given that he defines substance as that which persists (eternally), the underlying substratum is substance. Clearly, Kant intends to prove that in all change of appearance we must assume something persisting that underlies the change.

The first half of the principle should not be read as expressing a tautology; it is not an analytic truth. Instead, it should be read as a description of what is necessary in order to perceive changes *in appearances*.⁸²

Notice how closely our modified description of the principle reads to the first half of the principle of the A edition. When Kant writes that substance (or that which persists) is the object itself, what he means, again, is that an underlying substratum must be assumed in order for an appearance to be an object of perception. In the last chapter, we considered why the claim that “that which can change is the mere determination of substance” expresses the fact that substance’s quantum in nature could neither increase nor diminish. Thus, not only is there no justification for the criticism, but when the principle is carefully considered there seems to be good reason to think that Kant’s two principles express the same rule.

III. Are We Justified in Reading the First Analogy as a Proof of Substance In General?

The final critique we will consider concerns whether or not the First Analogy is meant to establish that *material* substance is a necessary assumption for our form of experience or if it is meant to establish that substance in general is a necessary presupposition. The argument we now consider differs from those in previous sections in an important respect: if successful, Kant’s proof in the First Analogy could still be successful. In fact, were Kant concerned just with material substance, we would have an answer to Hume’s claims about material substance. We

⁸² Bird expresses the point in the following way: “The tautology expresses a conceptual and analytic relation between its terms *given* their use in experience, but the principle adds to this the nonanalytic claim that they *have* such a use in relation to the appearances (p. 452).”

will first consider why one might believe that Kant is concerned with material substance in the First Analogy. Then we will consider several reasons why we are justified in reading the First Analogy as a proof of the necessity of substance in general.

One reason that we might believe that the First Analogy is actually concerned with material substance, and not merely substance in general, is that Kant's language and examples in the First Analogy lead one to infer that he is concerned specifically with material substance. For instance, the example he provides at A 185/B 228 specifically mentions material substance.

Kant writes,

A philosopher was asked: How much does smoke weigh? He replied: If you take away from the weight of the wood that was burnt the weight of the ashes that are left over, you will have the weight of the smoke. He thus assumed as incontrovertible that even in fire the matter (substance) never disappears but rather only suffers an alteration in its form. (*CPR*, A 185/B 228)

Here Kant even uses the term "matter."⁸³ In distinguishing subsistence from inherence, Kant again turns to the example of matter (*CPR*, A 187/B 230). Given Kant's choice of examples and his language throughout the First Analogy, one might argue that we should assume that Kant is concerned with material substance and not merely substance in general.

At first glance, Kant's description of the principle of persistence in the B edition also seems to support interpreting the First Analogy as a proof of material substance. He writes, "In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature" (*CPR*, B 224). This appears to point to material substance. What would it mean to say that the quantum of immaterial substance neither increases nor diminishes in

⁸³ *Materie*

nature? It seems somewhat odd to speak of a non-corporeal entities' "quantum in nature." One might argue that spiritual substance has no quantum in nature. Strictly speaking, then the principle of the B edition would not be false. For if immaterial substance has no quantum in nature, then its quantum in nature would neither increase nor diminish. However, if this were one's argument we must wonder why Kant includes the clause concerning substance's quantum *in nature* at all. It also seems plausible to read the principle of the B edition as a principle concerning material substance given how Kant describes the persistence of the soul in the section of *CPR* entitled, "Refutation of Mendelssohn's proof of the persistence of the soul." There, he claims that "[E]ven consciousness always has a degree, which can always be diminished" (*CPR*, B414-415). In a footnote, he further explains that "[T]here are infinitely many degrees of consciousness down to its vanishing" (*CPR*, B 415, footnote). Consciousness seems like a viable candidate for spiritual substance. Thus, if we hold that spiritual substance has quantum, we should provide some explanation of how such a substance's quantum neither increases nor diminishes.

We will see that there is good reason for reading the First Analogy as a proof of substance in general. First, we consider textual support for interpreting the First Analogy as a proof of substance in general. Next, we consider the argument in the First Analogy and its relation to the Refutation of Idealism. We will see that if the First Analogy were meant to prove that our form of experience required us to assume the existence of *material* substance, then the Refutation of Idealism would not serve any purpose.

In *MFNS*, Kant writes, “From general metaphysics we take as basis the proposition that in all changes of nature, no substance either arises or perishes, and here it is only shown what substance shall be in matter” (*MFNS*, 542). Here Kant treats matter as a type of substance found in nature. This suggests that his phrase “in nature” is not limited to the realm of outer sense. Objects of outer sense (material objects) are governed by the principle of persistence, but so are objects of inner sense (immaterial objects). Kant indicates that non-material objects are governed by the principle of persistence when he writes,

[T]hat which is considered as object of inner sense can have a magnitude, as substance, which *does not consist of parts external to one another*; and its parts, therefore, are not substances and hence their arising or perishing need not be the arising or perishing of a substance; and their augmentation or diminution, then, is possible without violating the principle of persistence of substance. So, *consciousness*, and thus the clarity of representations in my soul, and therefore the faculty of consciousness, apperception, and even, along with this, the very substance of the soul, have *degree*, which can be greater or smaller, without any substance at all needing to arise or perish for this purpose. (*MFNS*, 543)

While Kant’s argument in the above passage may be quite difficult to understand, it seems clear that he attempts to demonstrate how immaterial substance can be augmented or diminished without violating the principle of persistence of substance. Here Kant seeks to explain how the principle of the persistence of substance can govern immaterial substances given the arguments presented in the “Refutation of Mendelssohn’s proof of the persistence of the soul.” If this reading is correct, then it appears that the First Analogy is intended to prove the principle of persistence of substance in general and not the principle of persistence of material substance. Thus while the First Analogy would serve as a response to Hume’s skepticism concerning substance in general, it would not specifically address Hume’s skepticism toward material

substance. If the First Analogy is successful, then Kant would be correct that we must assume the existence of substance, but he would not have shown that we must assume the existence of material substance. To demonstrate that we must assume material substance, Kant would need to make a further argument. He does this in a section of the *CPR* entitled “The Refutation of Idealism” (hereafter the Refutation).

In his book, *The Revolutionary Kant*, Graham Bird points out that the First Analogy is a proof of the persistence of substance in general. I argue that Bird’s interpretation is correct. Here, we will briefly consider Bird’s account though we will consider his arguments in greater detail in the next chapter.

Bird notes that Kant does not demonstrate that we must assume material substance rather than immaterial substance in the First Analogy. Bird refers to immaterial substance as “spiritual substance” and argues that it is not until the Refutation that Kant rejects spiritual substance as that which allows for all time-determination in favor of material substance. Bird argues that the First Analogy plays an important role in establishing why material substance is a necessary presupposition, but it is only supposed to show that we must presuppose substance in general (be it spiritual substance or material substance). Using this conclusion, Kant then demonstrates that spiritual substance will not suffice later in the *CPR*.

Throughout the section dedicated to the First Analogy in *The Revolutionary Kant*, Bird argues that if we read the First Analogy as a proof concerning material substance, then we are making a stronger argument than Kant intends. According to Bird, Kant provides no justification for reading the principle of persistence as a principle governing *material* substance

in particular. Instead, Bird claims, it is a principle pertaining to substance in general. By “substance in general,” we mean both material and immaterial substance. Bird writes,

As far as the *proof* is concerned “substance/accident” may be realized empirically in either outer or inner sense, or both; the account does not at this stage express a traditional preference for either material or spiritual substance. (Bird, p. 450)

To understand Bird’s argument, we must first briefly examine the distinction between inner and outer sense and how this distinction relates to the material/spiritual substance distinction.

As we have seen, Kant claims that time is our form of intuition that governs inner sense.⁸⁴ He writes, “Time is nothing other than the form of inner sense, i.e., of the intuition of our self and our inner state” (*CPR*, A 33/B 49). One might think that “inner sense” for Kant refers to our self-consciousness, something like the “I think,” expressed in Descartes *cogito*. However, Kant clearly seeks to distinguish the faculty of inner sense from the faculty of apperception (the faculty responsible for the “I think”). He writes, “[I]t is customary in the systems of psychology to treat inner sense as the same as the faculty of apperception (which we carefully distinguish)” (*CPR*, B 153). While the faculty of apperception is responsible for the “I think,” inner sense is what allows us to represent objects, either internal or external objects, temporally. In discussing inner sense, Kant writes,

It is not merely that the representations **of outer sense** make up the proper material with which we occupy our mind, but also the time in which we place these representations, which itself precedes the consciousness of them in experience and grounds the way in which we place them in mind as a formal condition... (*CPR*, B 68)

As we have seen, Kant argues that in order to represent an object, that object must conform to certain features of our minds. One of the ways in which they must conform is that they must be

⁸⁴ See chapter 3.

placed in a temporal framework before we are able to represent them as we do. Kant claims that the faculty of inner sense is what allows us to represent objects of experience temporally. Given that inner sense allows us to represent both internal and external objects temporally, we might wonder why we need to presuppose *material* substance in order to perceive objects temporally. If we have access to an “internal constant,” perhaps we could use that as the constant that the First Analogy demonstrates is necessary for all time-determination. Given the proof of the First Analogy, the “internal constant” would have to be a substance, but that does not rule out the possibility that necessary substance is spiritual substance. By “spiritual substance” we mean the type of substance Kant highlights when he writes, “I, as thinking being (soul), am substance” (*CPR*, A 348/B 406). One might think that we could turn to spiritual substance, an immaterial substance, as the necessary constant that we must presuppose in order to represent objects as being in a single time. Were we to do so, we would not need to presuppose *material* substance.

As Bird points out, the First Analogy leaves open the possibility of utilizing spiritual substance as the substance needed for all time determination. The First Analogy is neutral as to which type of substance must be presupposed. Kant is adamant that material must be presupposed, but the justification for this claim is found in the Refutation, not in the First Analogy.

Bird’s argument is something like the following: the First Analogy demonstrates that our experience of temporal determination depends on the presupposition of something absolutely permanent, but it does not show that this absolutely permanent thing must be assumed as a possibility of objects of outer experience. Instead, our experience of temporal

determination could arise from inner experience. That is, if we assume a spiritual substance that links the changing representations of ourselves together throughout all time (such that we remain even though certain of our features come into and go out of existence), then that substance could serve as the underlying substratum necessary for all temporal determination. As Bird puts the point, as far as the First Analogy is concerned, Kant “is neutral between identifying ‘substance’ empirically as either inner or outer” (Bird, p. 454).

Bird highlights two reasons for assuming that Kant’s proof is a proof of substance in general. He first argues that the First Analogy should be read as a proof of substance in general because Kant does not specify that we are dealing with material substance in particular. Bird claims that the proof of the First Analogy “does not rely on the way in which the category [of substance] is *empirically* realized in experience” (Bird, p. 450). As we saw when we examined Melnick’s interpretation of the First Analogy, Bird is correct to point this out. Kant does not provide the empirical criterion of substance until the Second Analogy. Because Kant does not specify what the empirical criterion is, the empirical criterion could be an experience of inner sense. If it were, then material substance would not be needed because spiritual substance could fill the need for a permanent substratum. Since Kant does not specify that the proof concerns *material* substance, we should read the proof as a proof concerning substance in general. Furthermore, as we have seen, Kant’s main discussion of material substance occurs in the *Metaphysical Foundations of Natural Science*, not in the *CPR*.⁸⁵

⁸⁵ See, *MFNS* 541-542.

The second argument Bird provides is more interesting and will prove to be important for our purposes. Bird claims that if we read the proof of the First Analogy as a proof regarding material substance, then Kant's proof in the Refutation would beg the question. To better understand this argument, we will briefly reconstruct Bird's summarization of the proof of the Refutation, though we will consider the proof in more detail in the next chapter.

The Refutation is a section that Kant added to the B edition of the *CPR*. Bird correctly points out that in the Refutation, Kant attempts to distance his transcendental idealism from more traditional forms of idealism (Bird, pp. 505-506). Bird prefaces his discussion of the proof of the Refutation by noting that, according to the conventional reading of the Refutation, Kant does not refute traditional idealism. Instead, traditionalists' readings of the Refutation leave Kant's theory "virtually indistinguishable from a traditional idealism" (Bird, p. 505).

The mark of traditional idealism, on Bird's reading, is that inner experience (experience concerning our thoughts and ideas) has an important epistemic priority over outer experience (experience of objects in space). Bird correctly reads the Refutation as Kant's attempt to reverse the priority afforded to inner and outer sense. Thus, on Bird's reading, Kant really seeks to refute traditional idealism, not merely modify it.

Bird's reconstruction can be summarized in the following way:

1. Kant first assumes that he is conscious of his existence as determined in time.
2. From the proof of the First Analogy, he knows that all time-determination presupposes something absolutely permanent in perception.
3. Kant argues that this absolutely permanent thing cannot be within him (i.e., cannot be spiritual substance), because it is only through the absolutely permanent thing that his existence in time can be determined.

4. Thus, his perception of the absolutely permanent can only arise through the perception of some outer thing.
5. Thus, his determination of his existence in time is only possible through the existence of things he perceives outside him.⁸⁶
6. Kant then elaborates on these five points by noting that consciousness of his existence is combined with the conditions of the possibility of consciousness. Thus, consciousness of his existence is bound up with things outside himself.
7. Thus, consciousness of his existence is an immediate consciousness of the existence of outer things. (Bird, pp. 506-7)

As we noted above, on Bird's reading all that the First Analogy shows is that there must be something absolutely permanent, it does not show that the absolutely permanent must be material substance. Step three then, supposedly rules out spiritual substance as the needed permanent. So it is only after the Refutation that we have justification for presupposing the necessity of material substance in particular. On this reading, in order to represent his existence as in time (which we know from step 1), Kant must appeal to something outside of himself. He must do so because he is able to represent himself as an object in a single time. In order to represent an object as existing in a single time, we must presuppose something absolutely persistent that underlies that single time. Since this is a condition for the possibility of representing an object in time, Kant believes that he must appeal to something outside himself which can serve as the necessary constant used to determine his place in time.

⁸⁶ Bird argues that Kant provides two versions of the claim that the absolutely permanent thing cannot be in him. The second version of the claims states that the absolutely permanent thing cannot be an intuition in him, because as it is a representation, it must have a permanent that is distinct from it in which its change and his existence in the time of such change can be determined. However, he notes that this version is not in the Refutation. Instead, it is found in the preface to the B edition (Bxl). We will consider this point in greater detail in chapter 5.

We should highlight that, if this interpretation is correct, Kant has reversed the epistemic priority afforded to inner sense. If the proof works, Kant has shown that a feature that the idealists believed was most certain (i.e., their own existence *in time*) now rests upon the possible perception of outer objects. I argue that Bird is correct in reading the First Analogy as a refutation and not merely a modification of traditional idealism. The Refutation was added to the B edition to demonstrate the necessity of material substance.

If the First Analogy demonstrated the necessity of material substance, Kant would have already refuted traditional idealism. He would have shown that for any temporal determination (including one's own existence in time), we must assume outer objects. Given that there is little evidence to support reading the First Analogy as a proof of material substance (in fact, the text seems to rule out this possibility) and that such an interpretation leads one to wonder why Kant would have thought it necessary to include the Refutation in the B edition, we ought to read the First Analogy as a proof concerning substance in general.

Given that our goal is to examine Kant's notion of material substance as a response to Humean skepticism, we will examine Kant's argument in the Refutation in greater detail in the next chapter. In doing so, we will consider two questions. First, does Hume's account in the *Treatise* rely on assuming substance in general? That is, does Hume's account commit him to the conclusion of the First Analogy? Second, does Hume's account rely on assuming material substance? That is, does Hume's account commit him to the conclusion of the Refutation?

Chapter 5: Is Hume Committed to the Concept of Material Substance?

In this chapter, we turn to the question of whether or not, given his own philosophical commitments, Hume should have anticipated Kant's conclusion that the concept of material substance is a necessary presupposition for our form of experience. That is, should Hume have been more Kantian? According to Kant, we necessarily represent all objects of experience temporally. Furthermore, we necessarily represent objects of experience in a single time. The First Analogy argues that we must presuppose something absolutely permanent in order to place objects within a single time. The Refutation then purports to show why that absolute permanent must be material substance. We now consider whether or not Hume, too, is committed to the results of the First Analogy and the Refutation.

In chapter three, we considered four assumptions on which Kant's proof of the principle of persistence relies. Our discussion of whether or not Hume should have accepted those assumptions was quite brief. In section I of this chapter, we consider Hume's relation to these assumptions in greater detail. In doing so, we consider two questions. First, given his claims in the *Treatise*, did Hume, in fact, accept the assumptions in question? That is, was Hume knowingly committed to any of Kant's four assumptions? Next, we consider whether or not he should have accepted the assumptions, given other claims in the *Treatise*. Though Hume may explicitly reject some of the assumptions in the *Treatise*, it is not clear that he should have done so. He, too, may rely on these assumptions without recognizing that he does so.

In the second section, we turn to the main issue of the chapter. Using our discussion from section I, we consider whether or not Hume ought to have granted that our experience assumes the concept of *material* substance as a condition for its possibility. In doing so, we consider two questions. First, given Hume's philosophical commitments, is he actually (though unknowingly) committed to the conclusion of the First Analogy? If so, he is committed to the claim that the concept of substance in general is a necessary presupposition for our form of experience. Second, given Hume's philosophical commitments, is he actually (though unknowingly) committed to the conclusion of the Refutation of Idealism? If so, he is committed to the claim that the concept of material substance is a necessary presupposition for our form of experience.

I. Hume and the Assumptions Needed for Kant's Proof

In chapter three, we considered four assumptions on which Kant's argument demonstrating the necessity of the principle of persistence relies. They are: 1) we cannot perceive time itself, 2) our apprehension of the manifold of appearance is successive and ever changing, 3) all objects of experience are in time and 4) there are three modes of time which give rise to two and only two distinct relations of time. We briefly considered whether or not Hume is committed to each assumption. We now consider each case in more detail. We consider both whether Hume actually accepted each assumption and whether or not he should have accepted each assumption, given his claims in the *Treatise*.

A. Time Itself is Not an Object of Perception

Recall that Kant argues that we cannot perceive time itself. Recall also that Hume uses the term “perception” quite differently than Kant. For Hume, perception includes anything present to the mind, be it an idea or an impression.⁸⁷ To translate Kant’s first assumption into Humean terminology, we might say that we have no impression of time itself. Time, for Kant, is a form of intuition, it is not itself an object of perception. Though Hume certainly does not consider time a form of intuition, he agrees that we have no impression of time itself. Time, for Hume, is an abstract idea that arises from our experience of successive impressions. As Hume puts the point, the idea of time “arises altogether from the manner, in which impressions appear to the mind” (*Treatise*, 1.2.3.7).

In chapter 3, we considered Hume’s example of five notes played in succession on a flute. He argues that the succession of notes provide us with an idea of time. He claims, “time be not a sixth impression, which presents itself to the hearing or to any other of the senses. Nor is it a sixth impression, which the mind by reflection finds in itself” (*Treatise*, 1.2.3.10). As we have seen, Hume holds that all of our impressions are either sensations or reflections. He thus claims we have no impression of time itself. Instead, Hume claims that our idea of time arises from our perception of succession. Furthermore, he argues that our perception of succession alone is needed for the idea of time to arise. He writes,

Wherever we have no successive perceptions, we have no notion of time, even tho’ there be a real succession in the objects. From these phenomena, as well as from many others, we may conclude, that time cannot make its appearance to the mind, either alone, or attended with a steady unchangeable object, but is always

⁸⁷ See chapter 1, section A.

discover'd by some *perceivable* succession of changeable objects. (*Treatise*, 1.2.3.7)⁸⁸

The above passage establishes that, for Hume, it is not mere succession from which our idea of time arises. It is not enough that all of our impressions are distinct, momentary, and successively ordered. For Hume we must also perceive the succession *in objects*. Were we to perceive only steady unchangeable objects (or an object in which the changes occurring were imperceptible), our idea of time would not arise.⁸⁹

Hume's assertion that we have no impression of time is consistent with his other remarks concerning possible objects of perception. His method for demonstrating this claim follows his usual practice. When he seeks to show that we have no direct impression of an abstract idea, his arguments usually involve three key moves: 1) He attempts to show that we cannot have an impression corresponding to the idea through sensation, 2) he attempts to show that we cannot have an impression corresponding to the idea through reflection and 3) he provides an account of the origin of the idea, which does not rely on a direct impression. Though each of the three moves is important to his strategy, the order in which he presents each move changes from one argument to the next. As we have seen, in discussing our idea of time, Hume first describes where the idea comes from: it arises solely from our experience of successive impressions. In his discussion of the notes played on the flute, he then rules out having an impression of time itself.

⁸⁸ At 1.2.3.7, Hume also claims, "As 'tis from the disposition of visible and tangible objects we receive the idea of space, so from the succession of ideas and impressions we form the idea of time, nor is it possible for time alone ever to make its appearance, or be taken notice of by the mind."

⁸⁹ We will further consider the role of succession as well as Hume's hasty dismissal of the possibility that a steady unchangeable object could give rise to the idea of time in part D.

When ruling out the possibility that sensation provides us with an impression corresponding to time itself he writes, "Five notes play'd on a flute give us the impression and idea of time; tho' time be not a sixth impression, which presents itself to the hearing or to any other of the senses" (*Treatise*, 1.2.3.10). Hume does not spend a great deal of time eliminating this possibility. He takes it for granted that few would claim to have a sensation of time itself. Time itself cannot be heard, seen, touched, etc., so it cannot be a sense impression. Though his discussion of this point is brief, we should note that prior to his discussion of time, Hume provides a lengthy discussion of why we do not have a sense impression of space itself (*Treatise*, 1.2.3).⁹⁰ Because he believes he has shown that we have no sense impression of space and, intuitively, space seems to be a better candidate as an object of sensation, he may think a lengthy discussion of time is not needed.

Hume's discussion of why reflection cannot provide us with an impression of time itself is a bit more detailed. Hume writes,

Nor is [time] a sixth impression, which the mind by reflection finds in itself. These five sounds making their appearance in this particular manner, excite no emotion in the mind, nor produce an affection of any kind, which being observ'd by it can give rise to a new idea. For *that* is necessary to produce a new idea of reflection, nor can the mind, by revolving over a thousand times all its ideas of sensation, ever extract from them any new original idea, unless nature has so fram'd its faculties, that it feels some new original impression arise from such a contemplation. (*Treatise*, 1.2.3.10)

To rule out the thesis that reflection provides us with an impression of time, Hume presents an

⁹⁰ For our discussion of Hume's argument concerning space, see chapter 1.

argument in the passage above that contains two important parts. The first part, what we might call the main argument, can be summarized as follows:

- 1) An impression of reflection arises from either the excitement of an emotion or the production of some affection.
- 2) The successive manner in which the notes are played does not excite an emotion that provides us with an impression of time.⁹¹
- 3) The successive manner in which the notes are played does not produce an affection that provides us with an impression of time.
- 4) Therefore, reflection cannot provide us with an impression of time.

As long as we accept step 1, Hume's argument is unproblematic. Should we agree with step 1 and find fault with either step 2 or 3, Hume would ask that we point to the impression of reflection. Unless we are able to do so, Hume's argument is sound.

The second part of the argument serves as a justification for accepting step 1 above. Why think that an impression of reflection only arises from the excitement of emotion or the production of affection? Why not think that contemplation could provide us a new impression? Perhaps contemplating ideas could provide us with a new impression. Hume assumes that such a possibility is absurd. Hume does not believe that the mere contemplation of ideas could produce a new impression. For Hume, ideas are derived from corresponding impressions, not the other way around.⁹²

⁹¹ This is not to say that the notes cannot excite *any* emotion. Surely one's emotions could be excited by the first few notes of Beethoven's 5th. Hume's point is merely that the successive nature of the impressions alone does not excite an emotion that provides us with an impression of time itself.

⁹² For our discussion of this distinction, see chapter 1.

This aspect of Hume's argument is problematic. Even if we accept Hume's impressions/ideas distinction, the conclusion that mere reflection cannot give rise to an impression of time itself does not follow. Hume is clear that impressions need not come from outer experience alone. Emotions and passions also provide us with impressions namely, impressions of reflection. How are we to be sure that some operation of the mind other than our emotions and passions could not provide an impression of time? The answer is that we cannot be sure, so Hume's conclusion is unwarranted. I believe Hume would accept this answer. However, a charitable reading of Hume would point out that in other instances where he utilizes the same form of argument, he would ask us to point to the impression in question. That is, if we wish to claim that some other operation of the mind provides us with an impression of time, we should point to the impression (and possibly the operation of the mind as well). Our inability to do so would provide justification for the claim that mere reflection is not the source of our impression of time. Such an argument would only support the claim that mere reflection *is not* the source of our impression of time. To support the further claim that mere reflection *cannot be* the source of our impression of time, Hume would point to the sensation-like character of our impressions. Given that our ideas are derived from impressions, impressions of reflection seem to be limited to emotions and affections. Thus if we rule out our emotions and affections as the source of our idea of time, then Hume would argue that we have also ruled out mere reflection as its possible source.

While Hume's argument for why we have no impression of time itself is interesting, what is most important for our purposes is that Hume agrees with Kant that time itself is not a

possible object of perception. Furthermore, given his claims throughout the *Treatise*, Hume is committed to this assumption.

B. Experience is Necessarily Successive

The second assumption necessary for Kant's proof of the principle of persistence is that our apprehension of the manifold of appearance is successive and ever changing. Though, again, Kant's vocabulary is quite different, Hume, too, claims that we experience our perceptions successively. In fact, several of Hume's arguments in the *Treatise* rely on this important assumption. While this assumption is clearly important for Hume, we have already considered it at some length. Thus, we will not spend too much time on it here. We will, however, highlight a few instances in which Hume relies on this assumption.

As we saw in section A of this chapter, Hume's account of our idea of time relies on a thesis about the successive nature of our representation of perceptions. Hume holds that our idea of time arises from a "*perceivable* succession of changeable objects" (*Treatise*, 1.2.3.7).⁹³ According to Hume, were our perception not successive, we could have no notion of time.

In chapter 1, we also saw this assumption at work. Recall that Hume claims we have no justification for our ascription of identity to objects over time. He argues that we have no impression of identity. Again, he claims that we ascribe identity to objects when we do not notice any variation in our successive perceptions. However, when we carefully consider the

⁹³ At 1.2.3.7, Hume also claims, "As 'tis from the disposition of visible and tangible objects we receive the idea of space, so from the succession of ideas and impressions we form the idea of time, nor is it possible for time alone ever to make its appearance, or be taken notice of by the mind."

nature of our perceptions, it is clear that they are in fact successive and the identity we ascribe to them is merely a fiction of the imagination.⁹⁴

Hume relies on this assumption again when he attempts to show that we have no justification for ascribing identity to ourselves over time. He writes,

...I may venture to affirm of the rest of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement. Our eyes cannot turn in their sockets without varying our perceptions. Our thought is still more variable than our sight; and all our other senses and faculties contribute to this change; nor is there any single power of the soul, which remains unalterably the same, perhaps for one moment. The mind is a kind of theatre, where several perceptions successively make their appearance; pass, re-pass, glide away, and mingle in an infinite variety of postures and situations. (*Treatise*, 1.4.6.4)

Clearly, Hume relies upon the assumption that our perceptions are successive in nature. He also indicates the momentary nature of our perceptions. He claims that if we were to have an idea of the self, then we would have an impression of the self. He argues, "It must be some one impression, that gives rise to every real idea" (*Treatise*, 1.4.6.2). However, he holds that we have no experience of any one impression that is invariable and gives rise to our notion of the self. Instead, our experience is a constantly changing bundle of successive momentary perceptions. If we consider ourselves at any particular time, then we are merely considering the perceptions we are having at that moment.

Hume also points out that when our perceptions are removed in, say, a dreamless sleep, we have no notion of the self. In such instances, he argues, the self does not exist (*Treatise*, 1.4.6.3). Given that we cannot point to a constant and invariable impression that gives rise to

⁹⁴ See chapter 1.

our idea of a persisting self, we have no justification for ascribing identity to ourselves over time.⁹⁵ Thus given the claims he makes throughout the *Treatise*, it is clear that Hume, too, holds that our experience is successive. He is therefore committed to Kant's second assumption.

C. All Objects of Experience are Represented in Time

As we saw in chapter 3, the assumption that all objects of experience are represented in time differs from the previous assumption in that, according to Kant, the successive nature of our representations alone is not enough to account for our temporal experience. When Kant claims that all appearances are in time, he is claiming not only that the manifold of appearance is always successive but also that those successive representations are structured in such a way that we necessarily represent them as in time. He maintains that time is "the *a priori* formal condition of all appearances in general" (*CPR*, A 34/B 50). Time provides the structure needed for us to represent both inner and outer objects of experience, thus all objects must be represented in time.

Whether or not Hume accepts this distinction is a difficult question. Consider the following passage:

A man in a sound sleep, or strongly occupy'd with one thought, is insensible of time; and according as his perceptions succeed each other with greater or less rapidity, the same duration appears longer or shorter to his imagination. It has been remark'd by a great philosopher,⁹⁶ that our perceptions have certain bounds in this particular, which are fix'd by the original nature and constitution of the mind, and beyond which no influence of external objects on the senses is ever able to hasten or retard our thought. If you wheel about a burning coal with

⁹⁵ In the Appendix, Hume ultimately rejects his account of personal identity. However, even in rejecting his account, he holds that our experience is successive. We will consider this in more detail in section II.

⁹⁶ John Locke

rapidity, it will present to the senses an image of a circle of fire; nor will there seem to be any interval of time betwixt its revolutions; merely because 'tis impossible for our perceptions to succeed each other with the same rapidity, that motion may be communicated to external objects. Wherever we have no successive perceptions, we have no notion of time, even tho' there be a real succession in the objects. (*Treatise*, 1.2.3.7)

One might think that Hume rejects Kant's third assumption, given the first sentence of the quotation. When we are sleeping or focused intensely enough on a single thought, the passage of time goes unnoticed. However, Kant's claim is not that we must be constantly aware of time and its rate of passage. Instead, Kant argues that when we represent an object we necessarily represent that object as in time, even if we are not always aware that we are doing so. When I am reading or lost in thought, I may not notice the passage of time. Kant would claim that, strictly speaking, I am not really aware of any object at all in such instances. But even in cases like these when I later reflect, I place the objects involved in the experience in a temporal setting. For example, focusing on myself as an object of experience in this case, I may note that before I was lost in thought, I was eating breakfast; during the time I was lost in thought, I missed an appointment; after I was lost thought, I called to reschedule the appointment. It is not our awareness of time that is at issue. Instead, it is that whenever we represent an object, we thereby place that object in a temporal context.

Hume's example of the burning coal in the above passage may also make us question whether he accepts the assumption that all objects are in time. The coal example is another instance of Hume's claim that when we do not perceive succession, we have no notion of time. However, Hume's argument again focuses on the recognition of the passage of time at a specific

interval. With the burning coal, we may not be able to locate an interval of time between the revolutions, but that is not Kant's point. Kant's concern is whether or not we place the representation of the circle of fire in time. Kant would argue that we necessarily represent this event temporally. It starts with our awareness when we are rapidly wheeling about the burning coal and ends when the revolutions slow to the point where the circle of fire is no longer visible.

Thus Hume's remarks in the above passage do not rule out his acceptance of the assumption that all objects are necessarily represented in time. However, there is little textual support for the belief that Hume knowingly commits himself to this assumption. Elsewhere in the *Treatise*, Hume indicates that he accepts a weaker assumption which will prove important for our purposes. While arguing that the idea of duration is a fiction, he claims that the idea of time is "for ever present with us" (*Treatise*, 1.2.5.29).⁹⁷ Henry Allison notes that this is as close to claiming that the representation of time is as *a priori* as Hume's empiricist commitments will permit (Allison 2008, p. 58). Whether or not he would have granted that the idea of time is *a priori*, we have reason to conclude that Hume grants that we are at least *able* to represent any object temporally.

When he claims time is forever present with us, Hume cannot mean that we are always aware of the passage of time (given his other claims in the *Treatise*). But it is quite reasonable to read this claim as an indication that we are always able to place our representations in a temporal framework. If time is forever present with us, then whenever we perceive an object we should be able to place that object in time. Notice that this is importantly different from Kant's

⁹⁷ We will consider this quotation in greater detail in the next section.

assumption that all objects are *necessarily* represented temporally, but as we will see, even if he is only committed to this weaker claim, Hume's notion of time must be revised.

Other arguments in the *Treatise* lend further support to our claim that Hume accepts this weaker assumption (i.e., that we are always able to represent objects temporally). He argues that all of our perceptions are successive. Furthermore, he holds that no perception is invariable and each perception is momentary. He also claims that the idea of time only arises when we perceive succession. Given that our notion of time arises from succession and all perceptions are momentary and successive, it is plausible that any given series of perceptions could give rise to our idea of time. Again, this is not to say that in any given instance we *are* aware that we are representing objects temporally, it is merely to say that in any given instance we *could be* aware that we are doing so.

Though there is good reason to believe that Hume accepts the weaker assumption, we now consider why one might think that he need not accept Kant's third assumption, i.e., that we *necessarily* represent objects temporally. For Kant, the assumption that all objects are represented in time is a necessary condition for our form of experience. Clearly, we have not yet shown that this is a *necessary* condition for Hume. Furthermore, though Hume claims that our idea of time arises from succession and all of our perceptions are successive, we have not shown that he endorses the assumption that succession is sufficient for our idea of time. In fact, it is clear from Hume's description that succession alone is not sufficient for our idea of time. That succession must also be perceived.

A Humean might claim that my experience could be such that I never notice the successive nature of my perceptions (though that succession would actually exist). If this were the case, then she could argue that I represent objects without the idea of time ever arising. In response to such a claim, we might argue that this is simply not how we experience the world. We could claim that such a case lacks factual support. We could further claim that Hume's assertion that time is forever present with us supports the thesis that we are not only able to represent objects in time but that we always do so. If we are always able to place objects in a temporal context, then seemingly we are necessarily representing objects temporally even when we do not recognize that we are doing so. Thus, there is some reason to believe Hume is committed to the assumption that we must represent objects temporally.

However, before we accept that Hume is committed to Kant's third assumption, consider the following argument:

- (1) Our idea of time only arises when we are consciously aware of the successive nature of our perceptions.
- (2) We do not always recognize the successive nature of our perceptions.
- (3) When we do not recognize the successive nature of our perceptions, we have no idea of time.

If Hume holds steps 1-3, then we can imagine a person who, though she has the ability to do so, does not recognize the successive nature of her perceptions. She therefore cannot form the idea of time. She would then supposedly be able to represent an object spatially but not temporally. Thus, it appears that even though some of Hume's arguments in the *Treatise* support the claim

that we must represent objects temporally, to this point Hume need not Kant's third assumption.

We will return to the question of whether or not Hume should have accepted the claim that we *necessarily* represent objects in time after we examine Kant's fourth assumption. Our discussion of the fourth assumption will further support the assertion that Hume should have accepted Kant's third assumption. However, we will see that even if he is only committed to the weaker assumption that we considered earlier (i.e., we are always able to represent object temporally), his notion of time must be modified and he is and he must be committed to the conclusion of the First Analogy.

D. There are Three Modes of Time

The final assumption on which the First Analogy relies is that there are three modes of time: persistence, simultaneity and succession. As we saw in chapter 3, Hume rejects this assumption. Hume's account of time relies heavily on the notion of succession, so he certainly recognizes its importance. His description of succession does not rule out treating it as a "way" or "mode" of time. As we saw earlier, Kant's modes of time refer to the ways objects exist in time.⁹⁸ So Kant's modes assume a single time in which we can represent objects in different ways. Hume insists, contra Kant, that our perception of succession is solely responsible for our notion of time. Thus it appears as though, for Hume, there is a single mode of time: succession. However, as we will see, Hume appears to treat simultaneity as a mode of time and (though he is not aware of it), he, too, is committed to persistence as a mode of time.

⁹⁸ See chapter 3.

Recall that according to Kant, persistence is necessary for the other modes of time. Even if Hume would have granted Kant's terminology in the case of succession (referring to secession as a mode of time), he clearly rejects the role Kant ascribes to persistence. As we saw in chapter three, the mode of time which Kant refers to as persistence Hume describes as duration. Hume uses the term "duration" to cover cases of both relative persistence and absolute persistence. He rejects the claim that we have an impression of either relative or absolute persistence. On Hume's account, the idea of duration is nothing more than a fiction. Like our idea of time, our idea of duration arises solely from our perception of successive representations. He writes,

I know there are some who pretend, that the idea of duration is applicable in a proper sense to objects, which are perfectly unchangeable; and this I take to be the common opinion of philosophers as well as of the vulgar. But to be convinc'd of its falsehood we need but reflect on the foregoing conclusion, that *the idea of duration is always deriv'd from a succession of changeable objects, and can never be convey'd to the mind by any thing stedfast and unchangeable.* (*Treatise*, 1.2.3.11, my emphasis)

Here, Hume rejects the thesis that the idea of duration arises from something steadfast and unchangeable because, on his account, we have no impression of something steadfast and unchangeable. He argues that since all of our perceptions are necessarily successive, there is no impression that could give rise to the idea of duration. Instead, we merely posit enduring objects when our successive representations resemble one another.

While Hume would not have accepted the role Kant attributes to persistence, his account relies on such a claim. Note that Hume's argument against the idea of duration does not address the point of Kant's principle of persistence. As we have seen, Kant does not argue in the First Analogy that we have any *impression* of substance. It is not that our idea of substance,

be it material or immaterial, is derived from some particular impression or set of impressions. Instead, we must *assume* an underlying substance in order to represent objects. We must assume something that persists in order to link our successive representations together. The fact that we experience objects serves as evidence for the thesis that we must assume a single unchanging underlying substance that endures through all time. Were we to instead assume that substances could come into and go out of existence, Kant argues that the different substances would give rise to different times.

Kant's argument rejects the Humean account of time. Kant claims that succession alone is not enough to represent objects in time. As we saw in chapter 3, Kant asserts that if our experience were actually as Hume describes, we could not represent objects at all. If our experience were merely of successive momentary impressions, there would be nothing linking those impressions together.

Let us return to Hume's flute example. Henry Allison provides some helpful explication of Hume's position. He writes,

[W]e cannot regard these notes as given in a single, compound impression, which is then 'copied' by an idea, because, as successive, they do not exist at the same time, though they succeed each other *in* the same time. Thus, in order to form the compound idea of the five successive notes, it is necessary to bind them together in the imagination. (Allison 2008, p. 55)

Were there nothing binding the perceptions together, our experience would be of momentary flashes of changing perceptions.⁹⁹ The representation of objects, on Kant's view, relies on more stability than the Humean account can provide. The central point is this: Kant would argue that

⁹⁹ For more on this issue, see chapter 3.

on Hume's account the successive perceptions are bound together, but Hume does not explain *how* they are bound together. Instead, he considers ideas like substance in general, which can bind the perceptions together, mere fictions. While Kant would agree with Hume that the single time in which we experience the five successive notes is not the result of some sixth impression, he would claim that succession alone cannot account for our experience of time. Succession, Kant argues, already assumes temporality. When we say the notes are successive, we mean they are sequentially ordered *in time*. One note comes *before* the next. Thus, Kant holds that while Hume is absolutely correct that we have no impression of time itself, Hume fails to recognize that the only way we could identify that the notes are successive is to order those notes in a single time. Thus, the successive nature of our representations cannot be responsible for our idea of time because successive ordering already assumes an underlying idea of a single time linking the notes together. As we saw in chapter 3, such a notion of time involves assuming an underlying permanent (substance) that allows us to link successive moments together.

Though Hume focuses on the role of succession, he is also committed to simultaneity being a mode of time. Again, we must translate Kant's terminology into Hume's. Hume speaks of the coexistence of impressions or of impressions being cotemporary in the mind rather than simultaneous. He holds that we experience the coexistence of different parts of a complex impression, but his discussion is quite limited (*Treatise*, 1.4.5.12). Furthermore, the objects that coexist on Hume's account do not exist for more than a moment because, as we know, he claims duration is a fiction. But even Hume's limited notion of coexistence utilizes a more robust notion of time than his account allows. When we experience different impressions as coexisting,

say the taste, smell, color and tangibility of a piece of fruit, we are placing these coexisting impressions in time.¹⁰⁰ We represent these impressions as separate but closely related properties of an object that persists through some time. But, Kant argues, this representation assumes that we can place this relatively persisting object in a single time. In order to represent the object in a single time, we must assume there is something absolutely permanent which underlies time.

Notice that our discussions of persistence and simultaneity both utilize Kant's argument that there is only one time. If a Humean were to reject the thesis that we represent objects in a single time, there is good reason to think that she would be unconvinced by Kant's claim that the principle of persistence is necessary for our experience of objects. However, Hume seems to rely on the assumption that there is only one time without acknowledging that he does so. While arguing that our idea of duration is a fiction, Hume writes,

But tho' it be impossible to show the impression, from which the idea of time without a changeable existence is deriv'd; yet we can easily point out those appearances, which make us fancy we have that idea. For we may observe, that there is a continual succession of perceptions in our mind; so that the idea of time being for ever present with us; when we consider a stedfast object at five-a-clock, and regard the same at six; we are apt to apply to it that idea in the same manner as if every moment were distinguish'd by a different position, or an alteration of the object. The first and second appearances of the object, being compar'd with the succession of our perceptions, seem equally remov'd as if the object had really chang'd. To which we may add, what experience shows us, that the object was susceptible of such a number of changes betwixt these appearances; as also that the unchangeable or rather fictitious duration has the same effect upon every quality, by encreasing or diminishing it, as that succession, which is obvious to the senses. From these three relations we are apt to confound our ideas, and

¹⁰⁰ This is Hume's example. See *Treatise*, 1.4.5.12.

imagine we can form the idea of a time and duration, without any change or succession. (*Treatise*, 1.2.5.29)

In the last section, we considered Hume's claim that time is "for ever present with us." We took this to mean that, at the very least, whenever we represent an object, we are able to represent that object temporally.¹⁰¹ Notice that in Hume's example in the quote above, we are judging the object according to a single time. He claims that we are apt to apply the idea of time to an object "as if every moment were distinguish'd by a different position." As we have seen, the problem, according to Hume, is that the "time" in which we represent the object is fictitious because we believe it is an idea of more than mere succession. But notice that Hume's account relies on the assumption that the fictitious time, which is forever present to us, is the same time. Were it not, we would not be able to treat the "object" as a single enduring object. That is, the time Hume describes must be the same time if we are able to ascribe identity to objects in that time. In Hume's description, we are led to treat the objects as enduring because our successive representations resemble each other from one moment to the next. But again, this assumes that the moments are ordered in the same time.

Notice that so far we have not shown that Hume assumes that there is only one time. We have merely shown that in order to ascribe identity to an object at different moments, he is committed to the thesis that those moments must be related in the same time. Perhaps there could be more than one time, but whenever we ascribe identity to a particular object, we are required to treat that object as existing in different moments of a particular time. Thus each

¹⁰¹ We will consider whether Hume is committed to Kant's more radical assumption that we necessary represent objects temporally momentarily.

object would be assigned its own time. Such a thesis would be difficult to maintain (as it would leave us with no means of determining how two different particular objects are temporally related to one another) but we have not yet shown that Hume is committed to the claim that there is only one time. However, when we turn to another of Hume's examples, we see he makes the assumption that we represent objects in a single time.

While discussing the fiction of personal identity, Hume asks, "What then gives us so great a propensity to ascribe an identity to these successive perceptions, and to suppose ourselves possess of an invariable and uninterrupted existence thro' the whole course of our lives" (*Treatise*, 1.4.6.5). In answering this question, Hume claims, "We have a distinct idea of an object, that remains invariable and uninterrupted through a supposed variation of time; and this idea we call that of identity or sameness" (*Treatise*, 1.4.6.6). He then argues that the idea of this invariable object is a fiction and thus our notion of personal identity is unjustified. On his view, we are nothing but a bundle of different perceptions.¹⁰²

What is important for our purposes is that according to Hume, the fiction of personal identity arises when we believe some object (the self) remains invariable through a supposed variation in time. The supposed variation in time stretches at least throughout our lives. Here, Hume relies on the fact that we are able to place our whole lives within a single time. Again, if this were not the case, it would not be possible to treat ourselves as identical over time. The drive to do so comes from the fact that the successive momentary impressions resemble one another and can be arranged within the same timeline. If we also recognize our lives as having a

¹⁰² For more on Hume's notion of personal identity see: Biro, pp. 47-51; Stroud, pp. 118-140; Garret 1997, pp.163-186; and Millican, pp. 199-207.

beginning and end, then we are seemingly placing ourselves in a time that extends beyond our lives. If I recognize that my mother existed before me, Napoleon existed before her, Aristotle before him, etc., then I am placing all of these existences within a single time that stretches beyond my existence. Kant would argue that our ability to relate these different times to one another is what constitutes being part of the same time.

In the Appendix of the *Treatise*, Hume retracts his account of personal identity. He writes,

But having thus loosen'd all our particular perceptions, when I proceed to explain the principle of connexion, which binds them together, and makes us attribute to them a real simplicity and identity; I am sensible, that my account is very defective, and that nothing but the seeming evidence of the precedent reasonings cou'd have induc'd me to receive it. If perceptions are distinct existences, they form a whole only by being connected together. But no connexions among distinct existences are ever discoverable by human understanding. We only *feel* a connexion or determination of the thought, to pass from one object to another. It follows, therefore, that the thought alone finds personal identity, when reflecting on the train of past perceptions, that compose a mind, the ideas of them are felt to be connected together, and naturally introduce each other. However extraordinary this conclusion may seem, it need not surprize us. Most philosophers seem inclin'd to think, that personal identity *arises* from consciousness; and consciousness is nothing but a reflected thought or perception. The present philosophy, therefore, has so far a promising aspect. But all my hopes vanish, when I come to explain the principles, that unite our successive perceptions in our thought or consciousness. I cannot discover any theory, which gives me satisfaction on this head. (*Treatise*, Appendix 20)

Here Hume retracts his account that we are nothing but a bundle of different perceptions. His retraction has created controversy among scholars, who debate exactly why Hume denies his initial account. Though scholars disagree over exactly why Hume denies his initial account,

most agree that his main concern in the Appendix is that, according to his initial account, there is no means of explaining how the different momentary perceptions (that constitute the idea of the self) link together to form a unified consciousness. That is, his initial account assumes we are nothing but a bundle of different perceptions, but this account provides no explanation of *how* these different perceptions are bundled together.

Hume's modification in the Appendix is important to our argument for two reasons. First, it is important because even when rejecting his initial account of personal identity, Hume assumes a single time in which consciousness exists. Thus, we have more evidence that Hume is committed to the thesis that there is only one time. Second, his modification in the Appendix is important because he indicates that he recognizes that there must be something that links or unifies our successive representations, though he cannot point to what that is.¹⁰³

Thus, though Hume claims that our idea of time arises solely from succession, his account assumes an underlying time that allows us to represent successive representations as successive; his description of time and his discussion of personal identity indicate that Hume assumes that our successive representations are arranged *in the same time*. Were they not, it would not be possible to treat successive representations that resemble one another as successive representations of the same object. We do so, on Hume's account, because we believe they exist through some stretch of time. But, we have seen, ascribing identity over time requires that the different representations are placed within a single time.

¹⁰³ We will return to this point in section II.

Hume's discussion of personal identity also provides another reason to believe that, though he does not recognize it, he is committed to Kant's third assumption (the claim that we necessarily represent objects in time). Recall that Hume is committed to (1) the thesis that our representations are successively ordered and that, though we do not always do so, we are always able to reflect upon that succession and recognize it as a successive series. He further holds (2) that time is "for ever present with us" (*Treatise*, 1.2.5.29). Finally, he is committed to the claim that (3) we treat ourselves as a single object throughout time. Given these three claims, it would appear that Hume should have granted that we necessarily represent objects temporally. This is because (a) in order to recognize a series as successive we must already have represented that series temporally, (b) if time is forever present with us, then we are seemingly always representing objects temporally, and (c) if we are able to represent ourselves as identical through time, then it appears that we are always representing ourselves as objects in time. Hume, however, nowhere grants these assumptions. Indeed, he provides no explanation for (a), (b), or (c).

Recall that, according to Kant, the idea of substance serves as a necessary backdrop for temporal determination. In chapter 3 we saw that, for Kant, "substance" refers to that which persists. We have also seen that Hume's account of our idea of time appears to rely on such a permanent. Notice now that if we accept Hume's account, we are able to treat ourselves as objects that remain constant through time. Perhaps then we could use the self as the backdrop necessary for temporal determination. Hume seems to grant that we assume the self as a permanent. Hume, of course, argues that such an assumption is unjustified, which we will

consider momentarily. But if he grants that we assume that we are an identical object through time, then the self could serve as the necessary permanent backdrop and all objects of perception could be represented temporally using that backdrop.¹⁰⁴

Though Hume appears to assume that we represent objects in a single time, Kant's claim is clearly much stronger than the assumption we have attributed to Hume. Kant argues that "[t]ime is not an empirical concept that is somehow drawn from experience" (*CPR*, A 30/B 46). For Kant, time provides the structure necessary for us to represent objects as we do and therefore serves as a necessary condition for our form of experience. Hume thinks of time as an idea constructed from experience. Furthermore, he claims that even if we assume a permanent substance, like the self, that assumption is unjustified. However, this skeptical account is unsatisfactory. Hume does not explain how temporal determination is possible. Hume's account provides no indication of how we are able to link successive representations together. If we are faced with mere succession and nothing links these successive representations together, why do we treat the representations as representations of an object? We must assume an underlying permanent in order to do so. Kant's account explains how the different modes of time are possible. Whenever we perceive an object, there is a structure in place that makes that perception possible. This structure assumes absolute permanence which allows us to place objects of experience in a single time. It allows us to link successive representations together in such a way that we are able to treat them as successive representations of objects.

¹⁰⁴ We will consider this idea, and how it differs from Kant's position in greater detail in the final section.

II. Should Hume Have Accepted Kant's Proofs?

According our interpretation, Kant provides a proof for the idea of substance in general in the First Analogy. He does not provide a proof for the idea of *material* substance. Using the results of the First Analogy, Kant then argues in the Refutation for the necessity of the idea of material substance. Given that our concern is whether or not Hume should have accepted that the idea of material substance is a necessary presupposition for our form of experience, the following questions arise: First, is Hume committed to the results of Kant's proof of substance in general? That is, is Kant's proof of the idea of substance in general convincing given Hume's claims in the *Treatise*? We have already answered this question, thus in part A we briefly review why Hume is committed to the idea of substance in general. We then highlight two necessary modifications for Hume's account in the *Treatise*. In part B, we consider whether Hume is committed to the results of Kant's argument in the Refutation. It is entirely possible that Hume should have accepted that we must assume substance in general, but not that we must assume *material* substance.

A. Should Hume have accepted the argument in the First Analogy?

We have seen that Hume argues that we have no impression of time itself. The idea of time arises from our perception of succession. Furthermore, any notion of duration or persistence through time is merely a fiction created by the mind. In order to justify the idea of time or of duration, we must point to some impression from which these ideas are derived. Since we

cannot point to an impression of ourselves or of some other substance that endures, Hume argues the idea is a mere fiction.

As we have seen, Kant's account of time differs drastically from the Humean conception. Time, for Kant, provides the structure to which empirical objects must conform. We have seen that Hume believes that the idea of time "for ever present with us" (*Treatise*, 1.2.5.29). He assumes, at the very least, that whenever we represent an object we are able to represent that object temporally. But we have also seen that Hume's conception of time is rather problematic. Hume has no way of explaining how it is possible for us to link successive representations together to represent objects. We have also seen that there are reasons to believe that Hume too assumes the claim that objects are *necessarily* represented temporally (though he does not recognize that he is making assumption). Hume appears to assume that all objects of experience are placed within a single time and he believes that the idea of time is always present with us.

Kant, as we have noted, grants many of Hume's claims concerning the idea of time. Kant accepts that we have no impression of time itself. Nor, on his account, do we have any impression of substance. Kant, however, does not agree that the only way to provide justification for either time or substance is by pointing to some impression. The proof of the principle of persistence is an example of a new form of justification Kant utilizes throughout *CPR*. Substance, for Kant, is an *a priori* concept. It is not a concept derived from experience. As Kant writes, "the principle of persistence is one that anticipates experience..." (*CPR*, A 767/B 795). It is a principle that describes what is necessary for our form of experience. Kant attempts to show that the idea of substance in general is necessary condition for our form of experience.

Given that we experience all objects of perception temporally and our experience of time relies on the idea of something which persists, Kant argues that we must assume an underlying substance.

Thus Kant's argument in *CPR*, and more specifically, the First Analogy provide two necessary modifications to Hume's skeptical account. First, Hume's account of time is problematic. If, as we argued in part I, Hume should have granted Kant the assumptions on which the First Analogy relies, then he also ought to have accepted that his account assumes an underlying substance. Though we cannot provide an impression of substance, we assume it whenever we represent an object in time. If our experience were really as Hume describes, there would be nothing allowing us to tie one successive representation to the next. Were we not to assume something permanent, our ideas of time and duration could not arise. In fact, given Hume's description, we could not experience objects at all.

This leads to the second necessary modification. Hume's requirement that every justifiable idea must have a corresponding impression is too narrow. Because Hume's own account assumes the existence of ideas that lack impressions, he is committed to a broader form of justification than he explicitly permits. His account assumes certain a priori concepts. Thus, even though he did not recognize it, Hume is committed to the principle of persistence.

B. Should Hume have accepted the argument in the Refutation?

Our second question is more difficult to answer. As we saw in chapters 3 and 4, the First Analogy is a proof concerning the concept of substance in general. It does not attempt to prove the necessity of the concept of *material* substance. We learn from the Refutation that material

substance is a necessary presupposition. The Refutation is supposed to “establish that we have **experience** and not merely **imagination** of outer things, which cannot be accomplished unless one can prove that even our inner experience, undoubted by Descartes, is possible only under the presupposition of outer experience” (*CPR*, B275).¹⁰⁵ In other words, Kant attempts to show that the existence of objects that are outside of him are a necessary condition for his consciousness of his own existence. However, in doing so, Kant argues that such consciousness depends upon the presupposition of an underlying permanent. He argues that the permanent cannot be something inside himself, so it must come from outside him. Thus, we must presuppose material substance for consciousness of our existence in time.

Kant’s proof of the Refutation is quite short so we will consider it in its entirety. A great deal has been written about Kant’s Refutation and our examination will be somewhat superficial. Our goal is merely to draw attention to the fact that Kant argues in the *CPR* not just that we need the general idea of substance as a condition of experience, but also that we need the presupposition of material substance or “objects outside us” as a condition of experience. After considering Kant’s argument, we will consider two questions. First, does Hume implicitly presuppose the idea of material substance in the *Treatise*? Second, when faced with Kant’s argument, should one committed to Hume’s view accept Kant’s argument?¹⁰⁶

Kant’s writes,

¹⁰⁵ For an interesting account of whether or not Kant actually succeeds in establishing that we do not merely have imagination of outer things in the Refutation, see section 1 of Luigi Caranti’s article, “Kant’s Criticism of Descartes in the ‘Reflexionen zum Idealismus’ (1788-1793).”

¹⁰⁶ For more on the Refutation of Idealism see, Guyer 1983, pp. 329-383; Allison 2004, pp. 275-303; Emundts, p. 170.

I am conscious of my existence as determined in time. All time-determination presupposes something persistent in perception. This persistent thing, however, cannot be something in me, since my own existence in time can first be determined only through this persistent thing. Thus the perception of this persistent thing is possible only through a **thing** outside me and not through the mere representation of a thing outside me. Consequently, the determination of my existence in time is possible only by means of the existence of actual things that I perceive outside myself. Now consciousness in time is necessarily combined with the consciousness of the possibility of this time determination: Therefore it is also necessarily combined with the existence of the things outside me, as the condition of time-determination; i.e., the consciousness of my own existence is at the same time an immediate consciousness of the existence of other things outside me. (*CPR*, B275-B276)

We now consider how the proof is supposed to work and whether or not Hume is committed to the results of the proof. In chapter 4, we followed Graham Bird's reconstruction of the proof of the Refutation. We now return to Bird's reconstruction of the argument, explaining each of the steps in greater detail and examining whether or not Hume is committed to accept each step.

The steps of the proof are:

1. Kant first assumes that he is conscious of his existence as determined in time.
2. From the proof of the First Analogy, he knows that all time-determination presupposes something absolutely permanent in perception.
3. Kant argues that this absolutely permanent thing cannot be within him (i.e., cannot be spiritual substance), because it is only through the absolutely permanent thing that his existence in time can be determined.
4. Thus, his perception of the absolutely permanent can only arise through the perception of some outer thing.
5. Thus, his determination of his existence in time is only possible through the existence of things he perceives outside him.

6. Kant then elaborates on these five points by noting that consciousness of his existence is combined with the conditions of the possibility of consciousness. Thus, consciousness of his existence is bound up with things outside himself.
7. Thus, consciousness of his existence is an immediate consciousness of the existence of outer things. (Bird, pp. 506-7)

In the first step of the argument, Kant assumes that he represents himself as an object in time. As one scholar notes, Kant is claiming something like “I am able to order everything (or almost everything) that I have experienced in time”(Emundts, p. 170). As we saw in section I, Hume claims that we regularly ascribe “invariable and uninterrupted existence” throughout the course of our lives (*Treatise*, 1.4.6.5). Thus, Hume, too, assumes that we are able to represent ourselves as objects existing throughout time.

Kant’s second step follows from the proof of the First Analogy.¹⁰⁷ He claims that all time-determination presupposes something absolutely permanent in perception. We have seen that Hume’s account of time presupposes an underlying permanent that links our successive representations together. Thus, Hume appears to be committed to Kant’s second step as well.

Kant’s third step needs more explanation. Recall that, according to Bird, Kant provides two versions of the third step. The version found in the proof itself is that Kant claims the absolutely permanent thing cannot be within him (it cannot be merely an object of inner sense),

¹⁰⁷ Guyer claims that there is a problem with this second step. He argues that, “[N]othing in the published text of the refutation explains *how* its conclusion is supposed to be reached. It offers no argument at all for the premise that something permanent is needed to make temporal determinations ...”. (Guyer 1987, p. 280) Guyer recognizes that the First Analogy is supposed to support the premise that something permanent is needed to make temporal determinations, but he argues that the First Analogy is unpersuasive. He claims that the First Analogy provides three separate arguments for the claims that an underlying permanent is needed for temporal determinations. However, we can dismiss Guyer’s second worry for two reasons. First, he misreads the First Analogy. It is not three separate arguments, but rather a single argument that avoids the problems Guyer cites. Second, and more importantly, our concern is whether or not Hume is committed to the conclusion of the First Analogy. As we have seen, given what Hume says in the *Treatise*, Hume is committed to the conclusions of the First Analogy.

because it is only through the absolutely permanent thing that his existence in time can be determined. Bird highlights the fact that this step appears to involve question begging. It looks as though Kant assumes that his existence in time cannot be determined by what is in his consciousness. But that is exactly the claim at issue, so without any further justification there would be no reason to accept Kant's claim. However, in the revised preface to the B edition, Kant provides a more credible version of this third step. There he claims that the third step should read:

But this persistent element cannot be an intuition in me. For all the determining grounds of my existence that can be encountered in me are representations, and as such they themselves need something persisting distinct from them, in relation to which their change, and thus my existence in the time in which they change, can be determined. (*CPR*, B xxxix)

Kant's argument seems to be that his consciousness of his own existence relies upon representations of himself. These representations are not fixed. The representations which allow him to determine his existence change through time. Since he is able to experience the representations changing through time, he must be presupposing that there is something permanent underlying his experience of these changing representations.

Given many of the claims he makes in the *Treatise*, we might think that Hume accepts this assumption. Hume continually argues that our ascriptions of personal identity are unjustified because we cannot point to any impression that remains the same throughout our lives. Hume's argument appears quite similar to Kant's. Kant and Hume agree that my idea of the self depends on my representations, and that those representations are always changing. So given what he argues in the *Treatise*, Hume, too, seems committed to this step. We will return to

the question of whether or not Hume is committed to this assumption in a moment. But before we do so, we examine the final steps in Kant's Refutation.

Kant's fourth step is that his perception of the absolutely permanent thing can only arise from something outside him. It cannot merely be a representation of some outer thing, because, again, our representations are continually changing and cannot provide us with the needed permanent. Paul Guyer notes that Kant's distinction between "a thing outside him" and a "mere representation of a thing outside him" is not very clear and thus the thesis of the Refutation is unclear (Guyer 1987, p. 280). In the A edition, Kant himself claims, "the expression **outside us** carries with it an unavoidable ambiguity, since it sometimes signifies something that, **as a thing in itself**, exists distinct from us and sometimes merely belongs to outer **appearance**" (*CPR*, A 373). Guyer argues that though Kant does not express his position clearly, the Refutation is not an argument about appearances or things in themselves. To read it as such is "to prejudge the actual outcome of the argument" (Guyer 1987, p. 282). Guyer argues that within the proof of the Refutation, Kant does not utilize transcendental idealist premises. Guyer claims that the intended conclusion of the Refutation is that "objects other than our own representations exist, and these objects endure through time and are in space as well" (Guyer 1987, p. 282). We will follow Guyer's reading here because Hume would likely reject an argument that relies upon assuming the distinction between appearances and things in themselves. That is, Guyer's reading seems like the reading that would best convince a Humean, so we will follow his interpretation.

Kant holds that a mere awareness of impressions is not enough to provide the needed permanent. Because our representations are not fixed, Kant maintains that nothing within him can provide the needed permanent. Thus the needed permanent must come from the perception of some outer thing. When Kant says that we must assume that the permanent must come from the perception of some outer thing, he is not claiming that we directly perceive the permanent. That is, I do not perceive material substance. Rather, he is claiming that the existence of objects outside of us (not mere representations) is a necessary condition for temporal determination.

The final two steps in Bird's reconstruction are said to help clarify the first five steps. In the sixth step, Kant claims that consciousness of his existence in time is necessarily combined with the conditions of the possibility of consciousness. Kant's argument is that objects distinct from himself serve as the conditions for the possibility of consciousness. Thus, consciousness of his existence is bound up with things outside himself. The final step is that consciousness of his existence is an immediate consciousness of the existence of outer things. Bird reads these two steps as Kant trying to make a stronger case for steps three and four. According to this reading, Kant attempts to show that "any experience makes a reference not only to a succession but also to a spatial environment, namely the subject's body" (Bird, p.511).

Notice that steps four and five follow directly from step 3. Thus if Hume is committed to Kant's third step, then it appears as though he is committed to Kant's conclusion. If the needed permanent cannot be something in us, then Hume would have to turn to something distinct from our representations to ground that permanent; he, too, would have to recognize the role material substance plays in temporal determination. Let us once again consider the third step.

Recall that in step three, Kant claims that the needed permanent cannot be in him; it cannot arise from inner experience. One might wonder why the permanent cannot arise from inner experience, according to Kant. Why couldn't immaterial substance, thought of as the empirical self, serve as the necessary constant? Kant is clear that the representation "I am" accompanies all thinking, so why couldn't that serve as the needed permanent? Kant addresses these questions in a note following the proof of the Refutation. He writes,

Of course, the representation **I am**, which expresses the consciousness that can accompany all thinking, is that which immediately includes the existence of a subject in itself, but not yet any **cognition** of it, thus not empirical cognition, i.e., experience... (CPR, B 277)

Kant argues that outer experience is necessary for cognition of the empirical self. The "I am" that can accompany all thinking is not itself a possible object of thought without outer experience. This seems to be due to our form of intuition. Since our intuition is sensible and not intellectual, our cognition relies on given sense impressions. Kant discusses this point in a footnote to the B Preface. There he says,

If I could combine a determination of my existence through intellectual intuition simultaneously with the intellectual consciousness of my existence, in the representation I am, which accompanies all my judgments and actions of my understanding, then no consciousness of a relation to something outside me would necessarily belong to this. But now that intellectual consciousness does to be sure precede, but the inner intuition, in which alone my existence can be determined, is sensible, and is bound to a condition of time; however, this determination and hence inner experience itself, depends on something permanent, which is not in me, and consequently must be outside me, and I must consider myself in relation to it. (CPR, Bxl-Bxli)

Kant's argument is far from clear. However, the point seems to be that since we have sensible intuition and our cognition relies on both sensibility (empirical intuition) and thought, we could have no cognition of the empirical self without something outside us. But it is still not clear why there can be nothing substantial in the self without assuming an outer permanent. That is, even if we grant that our representations are not fixed, it is not clear why this implies that the empirical self itself cannot possibly provide us with the necessary permanent.

The claim that we can have no knowledge of the empirical self without anything outside us is problematic. Though Kant is clear that we need both concepts and intuition for thought, it is not clear why inner sense with the help of a priori concepts could not give rise to cognition of the "I am" that accompanies all thought. Thus, it is not clear why outer sense is necessary for the cognition of the empirical self. If we could cognize the empirical self without outer objects, then the empirical self could serve as the needed permanent for temporal determination.

Scholars have offered different strategies to help explain Kant's position. One strategy is to fill out Kant's picture of the empirical self in order to show why the empirical self could not serve as the necessary constant. In *Kant*, Paul Guyer provides one such way of solving this problem that seems to fit with Kant's intent. According to Guyer's reading, representations compose the content of my empirical self. These representations are not fixed and need to be ordered. But such an ordering requires that the representations are determined in relation to some persisting thing that is not itself a representation. Therefore, "my empirical consciousness of myself as determined in time depends upon knowledge of the existence of something other

than my own representations" (Guyer 2006, p. 119). Guyer's reading fits with the text and may be the argument that Kant intends, but the proof still seems problematic. It does not convincingly rule out the possibility of immaterial substance serving as the necessary permanent. More importantly for our purposes, even if the proof works within Kant's system, it is far from clear that Hume is committed to the results of the Refutation.

In our examination of the First Analogy, we saw that without realizing it, Hume is committed to the assumptions on which Kant's proof relies. It is also clear that Hume's account of time assumes an underlying permanent, so Hume is committed to the principle of persistence. Hume's account of time must be amended. Hume's claim that every idea is derived from an impression also needs to be revised. His account relies on assuming the existence of certain things that have no corresponding impression. However, one committed to Hume's account need not to accept that the idea of material substance must be the underlying permanent. Kant's proof relies on assumptions that Hume need not have accepted. Kant's proof relies on the claim that our representations are the content of our empirical selves and these representations are not fixed. Kant also argues that there is an "I am" that can accompany all thought but cannot be an object of thought without experience of outer objects. Hume could argue that our empirical selves comprise more than just our representations. They also include an "I am" that ties these representations together and that it is the "I am" that allows for temporal determination. Were he to accept such a claim, he would still be committed to the conclusion of the First Analogy, but he would not be committed to the conclusion of the Refutation.

In the main text of the *Treatise*, Hume clearly denies the existence of the self (*Treatise*, 1.4.6). Since we have no enduring impression of the self, Hume claims the idea is a fiction. However, as we have seen, in the Appendix, Hume rejects his account of personal identity. He recognizes that there must be something that bundles our successive representations together. Given that Hume recognizes that his account of the self is problematic, and that there must be something that bundles our constantly changing representations together, a Humean could posit the idea of immaterial substance as both the necessary permanent for temporal determination and as that which serves to bundle our successive representations together. However, were she to do so, she would have to accept that there are some legitimate (i.e., non-fictional) ideas that do not have corresponding impressions. Neither the idea of material substance nor that of immaterial substance has a corresponding impression, so she would have to accept a new form of justification for some of our ideas. If she were to accept that the justification for some of our ideas arises from the fact that they are necessary for our form of experience, the idea of immaterial substance might be the best candidate for the needed permanent.

In the *Treatise*, it is not clear whether or not Hume accepts that there is an “I am” accompanying all of our judgments. He does, however, recognize that consciousness endures such that I am able to treat myself as an object that endures through time. Unlike Kant, he is not committed to that claim that we can have no cognition of the “I am” without outer objects. Thus, a Humean could point to the “I am” or some feature of consciousness as the underlying permanent needed for temporal determination.

This is not to say that a Humean ought to turn to the idea of immaterial substance rather than that of material substance. We have given no argument that immaterial substance would better serve as the permanent needed for temporal determination. We have merely shown that Hume's account relies upon a presupposed permanent. The point is, instead, that Kant's argument in the Refutation should not persuade a Humean to accept the necessity of material substance over immaterial substance. Furthermore, given that in the Appendix of the *Treatise* Hume himself appears to recognize that there must be something which bundles our distinct impressions together, a Humean might be more amenable to assuming the necessity of the idea of immaterial substance (the self), which makes it possible for us to link our various impressions together over time.

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