

PROLEGOMENA TO AN OCCASIONALIST METAPHYSICS

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In the Name of Allah, the Gracious, the Merciful, I bear witness that there is none worthy of worship except Allah, and that Muhammad is His servant and messenger.

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ABSTRACT

It is a fundamental doctrine of the Abrahamic religions, following from the belief in God as the creator, that He is the primary cause of all natural phenomena. Some, however, have gone further, to claim that God is the only cause. Consequently, there are no genuine created, or secondary, causes. The western tradition has coined the term ‘occasionalism’ for this doctrine, according to which all apparent instances of secondary causation are just that – instances of merely apparent, or occasional, causation. The idea being that, when a natural event is believed to have been caused by another, it is really only the case that it occurred on the *occasion* of the other.

The earliest articulation of the idea behind occasionalism might be the one that emerged in the early days of Islamic theology, as a tenet of the Asharite school of *kalam*. Various versions of the doctrine have also been held in the Christian world as well. Alfred Fredosso has more recently treated the topic, writing that his aim is “to take a first small step toward determining whether occasionalism can provide theists with a plausible and satisfying philosophy of nature...”

The aim of the present project is the same. As such, the guiding thesis will be that occasionalism can, indeed, provide theists with a plausible and satisfying philosophy of nature. We take this proposition as a tentative hypothesis, however; a presupposition of the possibility of such a philosophy of nature that is itself a necessary condition of the motivation for opening an investigation of what it might be like. The sufficient condition for motivating the investigation is supplied by the additional thesis, to the defense of which the first part of this project is devoted, that for any theology that includes belief in divine conservation, occasionalism is the only plausible account of the causal structure of

creation. The question of what kind of philosophy of nature is compatible with it should, then, be of interest to most theists.

Taking, as its starting point, a particular version of the occasionalist doctrine articulated by the eleventh century Muslim theologian, Abu Hamid Al-Ghazali, we will trace the implications of the occasionalist thesis as they bear on the most obviously and directly relevant area of the philosophy of nature – that of the metaphysics of causation. We will develop the beginnings of one possible positive account of causation and material nature compatible with occasionalism, and possibly capable of sustaining an argument for the doctrine independently from theological commitments. What is hoped for is an embryo of a philosophy of nature compatible with occasionalism that can at least be evaluated for plausibility and satisfaction, and serve as a model for future development and / or retooling.

Introduction

It is a fundamental doctrine of the Abrahamic religions, following from the belief in God as the creator, that He is the primary cause of all natural phenomena. Some, however, have gone further, to claim that God is the only cause. Consequently, there are no genuine created, or secondary, causes. The western tradition has coined the term ‘occasionalism’ for this doctrine, according to which all apparent instances of secondary causation are just that – instances of merely apparent, or occasional, causation. The idea behind this term, apparently, is that when a natural event is believed to have been caused by another, it is really only the case that it occurred on the *occasion* of the other.

The earliest articulation of the idea behind occasionalism might be the one that emerged in the early days of Islamic theology, as a tenet of the Asharite school of *kalam*. Various versions of the doctrine have also been held in the Christian world as well, associated with such names as Gabriel Biel, Malebranche, Descartes, and Berkeley. Alfred Fredosso has more recently treated the topic, writing that his aim is “to take a first small step toward determining whether occasionalism can provide theists with a plausible and satisfying philosophy of nature...”¹

The aim of the present project is the same. As such, the guiding thesis will be that occasionalism can, indeed, provide theists with a plausible and satisfying philosophy of nature. We take this proposition more as a tentative hypothesis, however; as a presupposition of the possibility of such a philosophy of nature that is itself a necessary condition of the motivation for opening an investigation of what it might be like.

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¹ Fredosso, (1988) 77

any theology that includes belief in divine conservation, occasionalism is the only plausible account of the causal structure of creation. The question of what kind of philosophy of nature is compatible with it should, then, be of interest to most theists.

The method of pursuing this question will be simply to start piecing together a philosophy of nature by following the implications of occasionalism where they lead. ‘Start’ is the operative word here, to describe what the reader will find in the pages that follow. A complete philosophy of nature, of course, is the work of a lifetime or lifetimes. We are fortunate, though, to have the work of many lifetimes past available to us. That is, we won’t be starting from a blank slate. This project will take, as its starting point, a particular version of the occasionalist doctrine articulated by the eleventh century Muslim theologian, Abu Hamid Al-Ghazali, and the section just following this is dedicated to laying out his occasionalist thesis, along with a concept of ‘power’ he holds that plays a central role therein.

After making the theological case for occasionalism, we will trace the implications of the occasionalist thesis as they bear on the most obviously and directly relevant area of the philosophy of nature – that of the metaphysics of causation. The central thesis of this section will be that, aside from the obvious denial of genuine causation in nature, the occasionalist should also actually reject wholesale logical reductionism with regard to causation. Thus, the defense of this thesis will be followed up with a critical discussion of some major existing reductive analyses of causation, showing that, and why, they fail. Afterwards, we will examine and refute an argument for realism about natural necessity, and actually construct, from its remains, an argument for occasionalism.

Then, we will return to a more in-depth discussion of the arguments and reasoning offered by Ghazali for occasionalism. Building on that material, along with contributions from such historical notables as Locke and Nietzsche, we will develop the beginnings of one possible positive account of causation and material nature compatible with occasionalism, and possibly capable of sustaining an argument for the doctrine independently from theological commitments. What is hoped for is an embryo of a philosophy of nature compatible with occasionalism that can at least be evaluated for plausibility and satisfaction, and serve as a model for future development and / or retooling.

CHAPTER ONE: OCCASIONALISM: THE THEOLOGICAL DEBATE

1.1 Ghazali's concept of power and an occasionalist thesis articulated

In *Al-Iqtisad fi al-I'tiqad (Moderation in Belief)*, at the end of his chapter on divine power, Al-Ghazali writes:

You have known from the sum of this that all temporal events, their substances and accidents, those occurring in the entities of the animate and the inanimate, come about through the power of God, exalted be He. He alone holds the sole prerogative of inventing them. No created thing comes about through another [created thing]. Rather, all come about through [divine] power.²

The essential thesis expressed here is couched in the statement that “all temporal events...come about through the power of God.” A clear understanding of what Ghazali means by this statement requires an understanding of his conception of power.

Ultimately, this conception – of power as a kind of intention – makes this claim distinct from the simple claim that everything is caused by God. As we shall see, it also forms part of the basis of his arguments for occasionalism.

Near the beginning of the chapter on power in the *Iqtisad*, Ghazali writes, “Thus the attribute additional [to the essence] through which the [agent] becomes prepared for [bringing about] the existing act we call ‘power;’ since ‘power,’ according to the convention of language is an expression of the attribute by which the act is rendered ready for the agent and through which the act comes about.”³ This statement calls into question what it means to say: 1) ‘the agent becomes prepared for bringing about the existing act’, and 2) ‘the act is rendered ready.’ The question is particularly pressing in view of the apparent implication that the act exists before it is brought about. Shortly, we

² Al-Ghazali, *Iqtisad* 99 (314-315)

³ Ibid 81 (297)

will be in a position to suggest an answer to this question. In the meantime, let us take the following as a first step in developing a formulation of Ghazali's concept of power.

Power: *1) a property of an agent, 2) that is additional to the essence of the agent, and, 3) through which:*

a) the agent becomes prepared for bringing about the act, b) the act is rendered ready for the agent, and c) the act comes about (if it does)

Ghazali's reason for specifying that power is an attribute additional to the essence of the agent is rooted in his conception of 'agent'. In the *Tahafut-ul-Falasifa* (The Incoherence of the Philosophers), Ghazali discusses the conditions of agency and action.

“ ‘Agent’ is an expression [referring] to one from whom the act proceeds,” he writes, “together with the will to act by way of choice and the knowledge of what is willed.”⁴

Being a cause, then, is not sufficient for being an agent.

The agent, however, is not called an agent and a maker by simply being a cause, but by being a cause in a special respect – namely, by way of will and choice – so that if one were to say, “The wall is not an agent; the stone is not an agent; the inanimate is not an agent, action being confined to animals,” this would not be denied and the statement would not be false.⁵

These passages allow us to formulate the following working definitions:

Agent: *For all x and y, x is an agent of y iff x causes y by knowingly willing and choosing y*

Act: *For all y, y is an act iff: there is an x such that x causes y by knowingly willing and choosing y*

⁴ Al-Ghazali, *Tahafut* 57

⁵ Ibid

In this definition, we are told that an agent of *y* is one who causes *y* by knowingly willing and choosing. An event proceeding from the essence of a thing would follow as a necessary consequence of the thing's being what it is, and not as a matter of choice. In this case, according to Ghazali, the event could not be an act, nor could that from which it proceeds be its agent. We are now in a position to modify our working formulation of Ghazali's concept of power as follows:

Power: *For all x and y such that 1) x causes y, 2) by knowingly willing and choosing y, power is the property additional to the essence of x by which:*

- a) x becomes prepared to cause y, b) y is rendered ready for x, and*
- c) y comes about.*

In *The Ninety Nine Beautiful Names of God*, on the names Al-Qadir and Al-Muqtadir (the All-Powerful and the All-Determiner), Ghazali writes: "Power is equivalent to the intention by which a thing comes into existence according to a determinate plan of will and knowledge, and in conformity with both of them."⁶ So power, as conceived by Ghazali, is not simply any property of a thing in virtue of which it causes another. It is the intention by which that which was intended comes about. This allows us to make a final modification to our formulation of the concept:

Power: *For all x and y such that 1) x causes y, 2) by knowingly intending y, power is the intention of x by which y comes about in the way that x knowingly intends*

This notion of power, then, involves more than just causation. Thus, Ghazali can open the chapter on divine power in the *Iqtisad* with, "we claim that the originator of the

⁶ Al-Ghazali, *Maqsad* 131

world is powerful.”⁷ If he were to write, “We claim that the originator of the world is a cause,” it would seem redundant. “Every well-designed act proceeds from a powerful agent;” he argues, “the world is a well-designed ordered act.”⁸ Again, if he were merely arguing that the world has a cause, the reference to design and order would be superfluous, but the concept of power as intentional requires this synthesis of the cosmological and teleological arguments.

So far, we have undertaken only to understand Ghazali’s concept of power, and have not touched on his reasons for holding it. Indeed, a concept of power this powerful deserves some argument, and this will come. For now, it is to be pointed out that, given this conception of power, Ghazali’s claim that all events come about through the power of God is significantly different than just the claim that all events are caused by God. It should be understood as follows:

*Necessarily, for all events e and times t, e occurs at t iff: God causes e at t,
by knowingly intending e at t*

This follows from the doctrine of the pervasiveness of divine power, as articulated by Ghazali. “One of its governing characteristics is that it is connected with all [things] enactable by [divine] power,” he writes, “and by “things enactable by divine power,” I mean all the possibles.”⁹ In the *Tahafut*, Ghazali defines the impossible as follows:

The impossible is not within the power [of being enacted]. The impossible consists in affirming a thing jointly with denying it, affirming the more specific while denying the more general, or affirming two things while negating one [of them]. What does not reduce to this is not impossible, and what is not impossible is within [divine] power.¹⁰

⁷ Al-Ghazali, *Iqtisad* 80 (296)

⁸ *Ibid*

⁹ *Ibid* 81-82 (298)

¹⁰ Al-Ghazali, *Tahafut* 179

He goes on to rule out such things as combining blackness and whiteness, an individual's being in two places simultaneously, will without knowledge, knowledge in inanimate matter, and changing genera (e.g. changing blackness into a cooking pot).¹¹ To further complicate matters, in the *Iqtisad*, Ghazali discusses the fact "that the one thing can be possible [and] impossible, but possible through a consideration of itself [alone], and impossible through a consideration of another."¹² The world, for example, can be called necessary considered as an object of divine will, impossible considered in relation to the absence of divine will, and possible "when one examines the essence, considering with it neither the existence nor nonexistence of the will."¹³ The possibility treated above, in the passage from the *Tahafut*, should then be taken as that for what Ghazali here calls possibility considered 'in itself'. The pervasiveness of divine power, then, should be understood as the connection of divine power to everything that is possible, considered 'in itself.' This connection consists in just the fact that if the thing does come about, it does so through divine power.

Earlier, we had raised the question of what Ghazali means by the statement that power is the attribute by which the act is 'rendered ready' for the agent, especially in view of the apparent fact that this 'rendering ready' occurs before the act exists. Perhaps this question can be resolved by reading 'act' as 'enactable' – a possibility of acting on the part of the agent. In this case, the 'rendering ready' of the act can be understood as its being intended by the agent for actualization. Likewise, the agent's 'becoming prepared' for bringing about the act can be understood as the agent's intending to perform the act. Ghazali's reference to the 'existing act' might, in this case, mean the existing possibility

¹¹ Ibid 179-180

¹² Al-Ghazali, *Iqtisad* 86 (301)

¹³ Ibid 85 (300-301)

of acting. On the other hand, it is to be remembered that the definition of power to which we have arrived is not simply the intention to act, but the intention by which the act comes about in the way it was knowingly intended. In this case, Ghazali's reference to the 'existing act' may be meant to specify that power is the attribute that 'prepares' the agent for bringing about the act that does, in fact, get brought about. The intention to perform an act that fails to bring about the act is not a power.

Ghazali's articulation of the pervasiveness of divine power can be formulated as:

For all x, if x is possible 'in itself', x iff 1) God causes x, 2) by knowingly intending x

From this premise, combined with:

For all events e and time t, if e occurs at t, then e at t is possible.

It follows that:

For all events e and times t, e occurs at t iff: God causes e at t, by knowingly intending e at t

For Ghazali, it follows directly from this that "no created thing comes about through another [created thing]." Neither he nor his contemporaries seem to have considered it a serious possibility that, for some e at t, both God and a creature cause e. However, that this is indeed the case with natural events became the dominant view of the matter in medieval European scholastic circles with the doctrine of divine general concurrence. It is to this, and the doctrine of divine conservation on which it rests, to which we now turn.

1.2 From divine conservation to concurrence or occasionalism

A doctrine common to Abrahamic religious traditions is that God is necessary, not only for the initial creation of beings, but also for their continued preservation in being.

The doctrine is couched in the first of two meanings Ghazali mentions of the name, *Al-Hafiz* (the All-Preserver), one of the ninety-nine names attributed to God in the Qur'an,

First, perpetuating the existence of existing things and sustaining them, the opposite of which is annihilation. God the most high is the preserver of the heavens and earth, the angels and existing things – whether they last a long time or not, as with animals, plants, and the rest.¹⁴

In the Christian tradition this doctrine became known as the doctrine of divine conservation. Thomas Aquinas defended the doctrine, on the basis of his Aristotelian metaphysical views, in the following passage:

The impression made by an agent does not remain in the effect when the agent ceases, unless that impression turns into and becomes part of the nature of the effect. Thus the forms and properties of things generated remain in them until the end, after the generation is done, because they are made natural to the things... But dispositions, bodily impressions, and emotions, though they remain for some little while after the action of the agent, do not remain permanently... But what belongs to the nature of a superior genus in no way remains after the action of the agent is over, as light does not remain in a transparent medium after the source of light is taken away. But being is not the nature or essence of anything created, but of God alone. Nothing then can remain in being when the divine activity ceases.¹⁵

For a thing to exist, for even a moment, independently of God, being would have to be part of its nature. Since it is God alone whose very nature is to be, everything exists only inasmuch as it is preserved in its being by God. This entails, of course, that there is nothing that can create being besides God. “Therefore, being is the proper effect of the

¹⁴ Al-Ghazali, *Maqсад*, 106

¹⁵ Aquinas, S.C.G. III 65

prime agent, and all other things act inasmuch as they act in the power of the prime agent.”¹⁶

In showing that God is everywhere and in all things, Aquinas argues that an efficient cause must be located with its proximate and immediate effect. Since every effect has being, and God alone is the cause and continual sustainer of being, God is, at all times, a proximate and immediate cause of every effect.¹⁷ Conversely, everything is an immediate effect of divine causation. But this is not only in the simple fact of their existing, but also in their being the particular things they are, bearing the distinctive properties that they bear.

Ghazali shares this general view. God’s being *Al-Hafiz* (the Preserver) is not just a matter of His preserving the existence of things, but also the delicate balance between “the opposing and contending elements within the skin of man and the body of animals, plants, and the rest of composite things.”

For were He not to preserve them, they would clash and separate, so that their mutual coherence would cease and their orderly arrangement disappear, along with the abstraction which they have become ready to receive by virtue of their orderly arrangement and coherence.¹⁸

On the names of God: *Al-Khaliq* (the Creator), *Al-Bari’* (the Producer), and *Al-Musawwir* (the Fashioner), he writes:

It might be thought that these names are synonymous, and that they all refer to creating and inventing. But it does not need to be that way. Rather, everything which comes forth from nothing to existence needs to be planned; secondly, to be originated according to the plan; and thirdly, to be formed after being originated. God – may He be praised and exalted – is creator [*khaliq*] inasmuch as He is the planner [*muqaddir*], producer [*bari’*] inasmuch as He initiates existence, and fashioner [*musawwir*]

¹⁶ Ibid III, 66

¹⁷ Ibid III, 68

¹⁸ Al-Ghazali, *Maqsad*, 106-107

inasmuch as He arranges the forms of the things invented in the finest way.¹⁹

It is primarily this doctrine and its implications that motivates discussion over the role of divine power in the natural world. Here, three possible positions emerge: mere conservationism, occasionalism, and that of divine concurrence. The difference between occasionalism and concurrentism is over the causal role created things play in the course of natural events. While occasionalists deny any real efficacy to created substances, concurrentists hold that God and created substances concur in the production of effects. The essential difference between mere conservationism and concurrentism is over the question of whether the causal relation between divine power and natural events is everywhere immediate, or merely mediate. Mere conservationists hold that God is only a mediate cause of normal natural events, while concurrentists maintain that God's causal relation to natural events is everywhere immediate. Our present aim is to show how the doctrine of divine conservation implies the causal immediacy of divine power to every natural event, ruling out mere conservationism, and leaving concurrentism and occasionalism as the only compatible options.

Our first task is to clarify the distinction between mediacy and immediacy with regard to a cause. As for many of the terms in this section, we will be depending on some definitions excellently formulated by Alfred Freddoso. The following are his definitions of "immediate" and "remote" cause.

x is an **immediate cause** of y at t if and only if

- (a) x exists at t , and
- (b) x is an active cause of y at t , and

¹⁹ Ibid, 68

(c) there is no set M such that (i) neither x nor y is a member of M , and (ii) each member of M is an active cause of y at t , and (iii) x is an active cause of y at t only in virtue of the fact that x causally contributes to the members of M existing at t^* (at or before t).

x is a **(merely remote) cause** of y at t if and only if

- (a) x is an active cause of y at t , and
- (b) x is not an immediate cause of y at t .²⁰

Freddoso's use of the term 'active cause' should be understood in terms of the Aristotelian distinction between active and passive causal powers.

The active causal powers of a substance delimit the range of its "proper" effects, i.e., the effects the substance is capable of producing or conserving directly through its own power when it acts upon suitably disposed patients in appropriate circumstances; the passive causal powers of a subject delimit the range of effects that might be produced or conserved in it when it is acted upon by suitably situated agents in appropriate circumstances.²¹

Freddoso's articulation of the principle of divine conservation is as follows:

(CON) Necessarily, for any participated being x and *time* t such that x exists throughout a temporal interval that includes t but begins before t , God conserves x *per se* and immediately at t .²²

The meaning of all this can be unpacked by breaking down the key terms via Freddoso's specifications:

God conserves x per se and immediately at t if and only if

- (a) God conserves x at t , and
- (b) God gives *esse-as-such* to x at t .²³

²⁰ Freddoso, (1991) 558

²¹ Ibid, 556-557

²² Ibid, 566

x **conserves** y at t if and only if

(a) x is an active cause of y 's existing at t , and

(b) for some temporal interval i that includes t but begins before t , y exists throughout i .²⁴

'Giving esse' is "giving existence to a substance by actualizing a concrete nature with the set of "specifying powers" endemic to its natural kind."²⁵ 'Esse' can be thought of as the actualized synthesis of existence and essence. It is distinct from essence in that it explicitly implies the actualization of a set of properties (specifically, "powers"), excluding reference to merely possible un-instantiated essences. Simultaneously, it differs from existence in that it "it admits of degrees or at least distinct grades, even though 'to have esse' and 'to exist' are equivalent in the sense that an entity exists if and only if it has some sort of esse."²⁶ To be is always to be some kind of thing, which in turn is to manifest a specific set of powers.

Created substances are possessed of a certain limited range of powers for the activation of which they require already existing substances with the capacity to be affected by them. For a substance to give esse is for it to actualize, in the effected substance, those properties that the effected substance is disposed to actualize, in virtue of the passive powers it has to receive the influence of the substance acting on it. To give esse-as-such is to actualize properties ex-nihilo, in the absence of any pre-existing subject, and without the need for any specific reciprocal passive powers in such a subject.

²³ Ibid, 565

²⁴ Ibid, 563

²⁵ Ibid, 559

²⁶ Ibid 559

According to Aquinas, since action requires being, and the beings require preservation in their being by God, it follows that “He did not once for all furnish them with active powers, but continually causes those powers in them, so that, if the divine influx were to cease, all activity would cease.”²⁷ That is, God alone gives *esse-as-such* to everything. Freddoso defines this notion as follows:

x gives **esse-as-such** to *y* at *t* if and only if

(a) *x* is a *per se* cause of *y* at *t*, and

(b) for any *z* such that *z* is either a constituent of *y* at *t* or an accident of *y* at *t*, *x* is a *per se* cause of *z* at *t*, and

(c) *x* has the power to give *esse* to any possible participated being.²⁸

To be a *per se* cause is just to be an active cause that gives *esse*:

x is a ***per se* cause** of *y* at *t* if and only if

(a) *x* exists at *t*, and

(b) *x* is an active cause of *y* at *t*, and

(c) *x* gives *esse* to *y* at *t*.²⁹

Aquinas’s assertion in the statement just quoted can be understood as an expression of the principle formulated by Freddoso as:

(ESSE) Necessarily, for any created entity *x* and time *t* such that *x* exists at *t*, God gives *esse-as-such* to *x* at *t*.³⁰

We are now in a position to read Freddoso’s formulations of the theses of divine concurrence (DGC) and the opposed “mere conservationism” (MC):

²⁷ Aquinas, S.C.G. III 67

²⁸ Freddoso, 562-563

²⁹ Ibid 561

³⁰ Ibid 567

(DGC) Necessarily, for any entity x and time t , if any created substance produces x at t as an immediate and *per se* cause, then it is also the case that God is an immediate and *per se* cause of x at t .

(MC) Necessarily, for any entity x and time t , if any created substance produces x at t as an immediate and *per se* cause, then God is a (merely) remote cause of x at t and not an immediate and *per se* cause of x at t .³¹

The principle of divine conservation, then, entails that, necessarily, God gives *esse-as-such* to every created thing that exists for any interval of time. Mere conservationists, however, are committed to denying that, necessarily, God gives *esse-as-such* to every created entity at all times. Their assertion that God is only a mediate cause of the effects of which created substances are immediate and *per se* causes entails that, for those entities at those times, God does not provide *esse-as-such*. They are thereby committed to an asymmetrical treatment of God's causal action *visa vie* his conservational action, according to which the effects of created substances do not depend on God for the initial actualization of their specific powers and properties, but begin depending on Him for their conservation the instant after they come about. The primary motivation behind the doctrine of divine conservation, however, is just that the divine action in virtue of which creatures persist in being is the same as that in virtue of which they begin to be, and that, therefore, their dependence on God for their initial creation is equivalent to their dependence on Him for their sustained existence. In this way, deism, the view that nature only depends on God directly for its initial creation, is denied.

But the asymmetry involved in mere conservationism makes less sense than deism. In this case, creatures' dependence on God for their creation as things of a

³¹ Ibid 566

specific kind is less direct than that of their continuation as such. Moreover, if the mere conservationist accepts that secondary causes play immediate roles in the conservation of created things, there is no reason for them to maintain that creatures depend directly on God for their conservation. There seems to be no reason, that is, why the mere conservationist does not simply embrace deism.

Deism, however, constitutes a serious compromise of God's omnipotence. Such a position entails that the effect exists, with its specific nature, independently of God's preservation. This would amount to something that God must deal with as a being with an independent nature, and hence, as something that must be acted upon in specific ways to bring about specific effects. This is the condition of the carpenter, who, in order to cut wood, must deal with it in a way determined by the wood's independent nature, thus, his need for an intermediary – the saw. He must work *with* the natures of things, as circumstances over which he has no direct control. The point can be illustrated by considering a hypothetical 'super power' machine that directly fulfills any command imaginable that its user specifies with a simple 'point and click'. Even if we imagine that the user of the machine is also its designer and its builder, we cannot conclude that he is omnipotent. If he wants this or that, he must point and click, and if he does not point and click, he cannot bring about his desired effect. He is limited by the independent nature of his machine.

Mere conservationism, though less broadly, imposes a similar condition on God's action in nature. The condition is imposed specifically on God's bringing about any effect e of a secondary cause, c , with a nature n (where n is a set of properties of e constituting its '*esse*'). In this case, it is a necessary condition that there be a secondary

cause of e , c , with a nature $n1$ where $n1$ is a set of properties had by c that includes a power or powers to bring about n in e . A possible objection on the part of the mere conservationist is that the view does not entail that God *cannot* immediately bring about a thing with its particular nature, but only that He *does* not immediately determine the nature of everything that comes about.

As formulated by Freddoso, however, mere conservationism states that, *of necessity*, where a created thing is the immediate *per se* cause of some effect's coming to be in time, God is merely a remote cause of the effect's coming to be. That is, given mere conservationism, it is impossible for God to be an immediate and *per se* cause of that event. The conservationist could argue that it is a logical entailment of a secondary cause's being immediate and *per se* to an effect that God is not, and that, therefore, no real limitation on the power of God is implied. To be a *per se* cause is to give *esse*; that is, to be that on which the effect depends for all those properties that constitute its distinctive nature. Thus, it might be argued that there is no other constituent or accident of y left to be given by any other cause in that regard. Likewise, for something to be an immediate cause is for it to be such that nothing contributes as a mediating cause between it and its effect. Thus, as a purely logical consequence, God is shut out of any immediate and *per se* contribution when a secondary cause plays both roles. This is no more a limitation on God's power than is, say, the fact that God cannot bring about something that is not brought about by Him.

Given all this, the mere conservationist is even more hard pressed to answer the question as to why the same logical consequences do not follow from a created thing's playing the role of an immediate and *per se* conserver. The conservationist is obligated

here to present a real difference between the action of causation and that of conservation in virtue of which it does not follow, as a consequence of a created thing x conserving, immediately and *per se*, another thing y , that God's simultaneously playing a similar role in relation to y is impossible. But there is no such difference. The roles of being the immediate and *per se* cause of y , and that of being the immediate and *per se* conserver of y are either both logically limited to one occupant x or they are not. If they are both so limited, the mere conservationist must choose between deism - abandoning the doctrine of divine conservation, or occasionalism. If neither roles are logically limited to a single occupant, then the conservationist has two options. One is to choose between occasionalism or concurrentism. The other is to assert that created immediate *per se* causes themselves necessarily exclude God from an action - contributing immediately and *per se* to the effects of these created causes – that it is logically possible for Him to perform. Such a compromise of God's power, arguably, is tantamount to sheer polytheism. Thus, the options, at this stage, for an adherent of the doctrine of divine conservation are between occasionalism and concurrentism.

1.3 *The problem with divine general concurrence*

Concurrentism, again, is the thesis that:

(DGC) Necessarily, for any entity x and time t , if any created substance produces x at t as an immediate and *per se* cause, then it is also the case that God is an immediate and *per se* cause of x at t .

The concurrentist is committed, then, in the case of any effect e of a created cause c , to the truth of the following regarding both God and the created cause:

- 1) There is no set of mediating causes of e such that either God or the created cause causes e only in virtue of causally contributing to the set (or some member thereof).
- 2) e directly depends on both God and the created cause with respect to the proper esse that it has [i.e., the actualization of the properties constituting its specific nature] insofar as it is an effect.

“In sum,” writes Freddoso, “concurrentists are committed to the view that when God concurs with a secondary agent to produce a given effect, God’s immediate causal contribution and the secondary agent’s immediate causal contribution are complementary, with neither rendering the other superfluous.”³²

The challenge, then, for the concurrentist, is to explain the relation of concurrence between the divine and created cause in such a way that compromises neither the immediacy to the effect of either, nor the causal efficacy of the contribution of either with regard to the effect. Besides these, Freddoso has identified two additional criteria of an adequate theory of concurrence.³³ Such a theory, he observes, must maintain the unity of the effect to the production of which God and the creature are said to concur, as well as the unity of the action by which they concur in its production.

That is, the concurrentist cannot explain concurrence by conceiving the effect as a composite and tracing the production of some components to God and others to the creature. This would amount simply to conceding that no effects in nature are brought about wholly and immediately by both God and creatures, but that, rather, some are

³² Freddoso, (1994) 145

³³ Ibid, 144, 151

brought about wholly and immediately by God, while others are brought about wholly and immediately by creatures.

The unity of the action by which God and the creature concur to bring about an effect follows on these considerations. According to the doctrine of concurrence, God's immediate and *per se* causal contribution to the production of any effect is everywhere a necessary condition of any creature's immediate and *per se* causal contribution to the production of that effect. Likewise, the creature's immediate and *per se* causal contribution to the effect is a necessary condition of the *concurrence* of God's immediate and *per se* causal action in the production of the effect (God, of course, could produce the effect alone, but that would not be an instance of concurrence). Importantly, the idea here is not simply that, in the absence of either contribution, some specific effect will not have been produced, but that no effect at all will have been produced. That is, in the absence of either causal contribution, the other does not exist at all. Thus, there are not two actions that, in combination, produce the effect. Rather, there must be a single action that manifests with the concurrence of God and the creature in producing the effect.

In the present section, we will argue that no plausible theory of divine concurrence can fulfill the criteria just specified, and that, consequently, occasionalism represents the only model of God's causal relation to natural events compatible with the doctrine of divine conservation.

Perhaps the first to suggest a theory of concurrentism was Thomas Aquinas. In both *Summa Theologica*, and *Summa Contra Gentiles*, he takes the opportunity to present a number of arguments against "the opinion of those who withdraw from natural things

their proper actions.”³⁴ Yet, he confirms that God’s causal efficacy is immediate and pervasive, for the reasons discussed above:

Therefore, He is the cause of action not only by giving the form which is the principle of action, as the generator is said to be the cause of the movement in things heavy and light; but also as preserving the forms and powers of things; just as the sun is said to be the cause of the manifestation of colors, inasmuch as it gives and preserves the light by which colors are made manifest. And since the form of a thing is within the thing, and all the more, as it approaches nearer to the First and Universal Cause; and because in all things God Himself is properly the cause of universal being which is innermost in all things; it follows that in all things God works intimately.³⁵

The implication, then, is that the effect proceeds simultaneously from both the creature cause and the divine cause. Aquinas responds to the following arguments against this contention:³⁶

1. One action cannot proceed from two agents. Thus, if an act is predicated of a natural agent, it cannot be predicated of God.
2. Conversely, by the same principle, if the act is predicated of God entirely, it cannot be predicated of the natural agent.

Aquinas answers a third argument, to the effect that such double-action on the part of God would be superfluous since He is capable of producing any effect without intermediaries, by contending that it serves the purpose of God, out of His abundant goodness, to share causal power with His creatures. However, neither this objection nor its answer is as decisive to the issue as the other two, which bear on the very intelligibility of the idea of an effect proceeding from two causes.

³⁴ Aquinas, S.C.G. III, 69

³⁵ Aquinas, S.T. I, 104

³⁶ Aquinas, S.C.G. III, 70

To this, Aquinas points out that an inferior agent depends on the power of a superior agent in its act, the way that the saw depends on the carpenter in our example. Here, Aquinas invokes a distinction between supposit and virtue in action, noting that an effect can proceed from both the supposit and virtue simultaneously, as different aspects of procedure.

Francis X. Meehan explains this distinction in the following terms:

Properly speaking, actions belong to and are predicated only of the supposit or individual substance. It is not the hand which strikes but man who strikes with his hand. It is not the intellect which thinks but man who thinks with his intellect. It is not the heat which causes heat, but fire which heats by the form of heat. The individual substance then is *what* acts...Nevertheless, with the sole exception of God whose action is His Being or Essence and whose operation is substantial action, individual substances act by principles (sources) and virtues of action.³⁷

From supposit and virtue in action are derived two corresponding kinds of immediacy to the effect. An agent that acts with immediacy of supposit does so in virtue of the absence of any subordinate cause operative between itself and the effect. An agent acts with immediacy of virtue to the extent that it requires no virtue other than its own in bringing about the effect.³⁸

Analyzed in this way, the carpenter's saw acts with immediacy of supposit in its effect on the wood, whereas it requires virtues other than its own (e.g. motion) in order to bring it about. The carpenter, on the other hand, acts with neither immediacy of supposit nor complete immediacy of virtue, as the saw comes between him and the effect, and he requires virtues other than his own to bring it about (aside from the virtues of the saw, of course, the divine virtue).

³⁷ Meehan 218

³⁸ Ibid 296

“As then it is not absurd for the same effect to be produced by an agent and the power of that agent,” writes Aquinas, “so neither is it absurd for the same effect to be produced by an inferior agent and by God, by both immediately, although in different manners.”³⁹ The same effect, then, can proceed simultaneously and immediately from the virtue of the carpenter and the supposit of the saw. Nevertheless, according to Meehan, the carpenter acts with more immediacy of virtue than the saw, because “it is a general rule that the higher the virtue, the more immediately does it act: on the contrary, the higher the supposit, the less immediately does it act.”⁴⁰

God on the contrary acts by an immediacy of virtue in everything that acts since no inferior virtue is conjoined to its effect save by the virtue of a superior agent and ultimately by His own virtue. Consequently, His influence is prior to, as well as more immediate, more intimate, and more vigorous than that of any secondary cause, however active or however proximate its supposit may be to the effect.⁴¹

God and the creature, then, can both be immediate causes of the same effect, because each of them enjoys a different kind of immediacy to it. But God, according to Meehan, is not limited to just one kind of immediacy. From God’s immediacy of virtue to each effect, His immediacy of supposit necessarily follows. “For while God operates with an immediacy of virtue in everything, He is at the same time suppositally present and immediately immanent in everything wherein He acts, since His virtue is not other than His essence.”⁴²

A complication arises in light of Meehan’s previous illustration, by way of the man striking with his hand, that actions are predicated of the supposit. The carpenter’s saw, being an individual substance, acts with immediacy of supposit, as no intermediate

³⁹ Ibid

⁴⁰ Ibid

⁴¹ Ibid

⁴² Ibid 297

substance comes between it and the effect. However, we do not predicate the act of cutting to the saw instead of the man. A second reflection shows that the hand is a supposit with its own virtues, and not merely a virtue of the man. Yet, the striking act is predicated of the man.

These observations call into question the simple principle that the action is predicated of the supposit, under which we would say that the saw cuts by way of its sharpness, and that the hand strikes by way of its solidity. It will be correctly pointed out that both the hand and the saw require virtues other than their own – at the natural level, each apparently requires motion proceeding from the man – in order to produce their respective effects. The fact that we normally predicate the action to the man in each case seems to be evidence, not to the principle, simply, that the act is predicated of the supposit, but rather that the act is predicated of the supposit with greater immediacy of virtue. Just as the virtues of the saw and the hand, at one level of observation, appear to act by means of the virtues proceeding from the man, “it is always and everywhere the virtue of secondary agents which act by means of and only in virtue of the Divine Agent.”⁴³ Since, then, God enjoys the ultimate immediacy of virtue in every act; it seems to follow that all acts should be predicated of Him.

Secondly, it is a simple inference, from the fact that no inferior virtue is conjoined to its effect save by God’s virtue, to the conclusion that no natural agent, on its own, is sufficient to bring about any effect. Secondly, since God is omnipotent, it follows also that no natural agent is necessary for the production of any effect. Thus, the natural agent is neither necessary nor sufficient for anything. God is both necessary and sufficient for the effect. So, on the presumption that that which satisfies the necessary and sufficient

⁴³ Ibid 298

conditions for the production of the effect is its cause, it follows that the effect proceeds from God, and Him alone. Thus, it seems that this model is in danger of rendering the secondary cause superfluous and collapsing into occasionalism.

But as Freddoso points out, the concurrentist must deny that, in the relevant circumstances, God is sufficient for the effect. In order to avoid the obvious impious implication of such a denial, Freddoso states it very carefully, in two ways. First, “concurrentists also assert that when God acts as a general concurring cause, His influence is not by itself – independently of the secondary agents – sufficient to produce the effect.” Second, “to put it more accurately, God’s actual influence in the mode of concurring simply does not exist in the absence of the secondary cause’s influence.”⁴⁴

This second, ‘more accurate’, statement is ambiguous. Does it mean that, in the absence of the secondary cause, God’s influence does not exist, or just that it is not in the mode of concurring? In the former case, the mode of concurring is understood as intrinsic to the influence in question. In the latter case, it is understood simply the relational property of being accompanied by the influence of the secondary cause. Clearly, concurring is a relational property.

Say y obtains at t , and there is no created substance x , such that x is an immediate and *per se* cause of y at t . It should follow from concurrentism that God’s “actual influence in the mode of concurring” with regard to y at t does not exist. However, it should also follow from concurrentist commitments that God is the immediate and *per se* cause of y at t . Clearly, then, the proposition “God’s actual influence over y at t in the mode of concurring exists” is not equivalent to “God is the immediate and *per se* cause of y at t .” On the other hand, “God’s actual influence over y at t exists” must be equivalent

⁴⁴ Freddoso, (1994) 152

to “God is an immediate and *per se* cause of *y* at *t*.” The latter is true whether or not God is acting in the mode of concurring. In that case, “God’s actual influence over *y* at *t* in the mode of concurring exists” must mean, “God is an immediate and *per se* cause of *y* at *t*, and there is a created substance *x*, such that *x* is an immediate and *per se* cause of *y* at *t*.” The mode of concurrence, then, is simply the relational property of God’s influence being accompanied by that of the secondary cause.

The necessity, of the influence of the secondary cause over the effect, for that of God’s “in the mode of concurrence” then, does not consist in God’s being dependent on the secondary cause in order to have an influence. It simply reflects the logical restraint that, without any influence on the part of another, there is nothing for God to concur with in the production of the effect. At most, it can be said that God’s influence with regard to the production of the effect is, alone, not sufficient for His *concurrence* with a secondary cause in that production, where such concurrence consists in just the simultaneous existence of a secondary immediate and *per se* cause of the same effect. As for His actual influence over the production of the effect, it exists, and is sufficient for the effect, regardless of there being any concurrence with a secondary cause or not. Once the ambiguity of the language is removed, it is clear that the situation with regard to efficacy remains unchanged. The secondary ‘cause’ is neither necessary nor sufficient for the production of the effect, but God is both necessary and sufficient for its production.

The relation between divine and natural action in regard to the effect under concurrentism, then, is as follows:

- 1) Necessarily, if (a created substance) *x* is an immediate *per se* cause of *y* at *t*, then God is an immediate and *per se* cause of *y* at *t*.

- 2) Necessarily, if God, as an immediate and *per se* cause of y at t , is concurring in the production of y at t , then there is (a created substance) x that is also an immediate *per se* cause of y at t .

If God's action in producing the effect is necessary for that of the secondary substance's production of the same, then what is sufficient in that regard? There are only three possibilities – the divine action itself, something provided by the created substance in question, or something provided by some other created substance. In the first case, God's being an immediate and *per se* cause of y at t would be both necessary and sufficient for the created substance being so. Since, then, the created substance's being an immediate and *per se* cause of y at t is a necessary condition of God's concurrence in the production of y at t , assuming that God and the created substance's both being an immediate and *per se* cause of y at t constitutes the necessary and sufficient conditions for concurrence, then God's being an immediate and *per se* cause of y at t , alone, fulfills these conditions. In this case, God's concurring to produce an effect is equivalent to His singly producing it, and occasionalism effectively follows. Thus, to maintain concurrentism, the minimally sufficient conditions for a created substance's being an immediate and *per se* cause of y at t must include something over and above God's being an immediate and *per se* cause of y at t .

Likewise, the sufficient conditions for a created substance's being an immediate and *per se* cause of y at t cannot be something contributed by the created substance itself. If it were something contributed by that substance, it would be either the simple fact of its being an immediate and *per se* cause of y at t , or not. If the sufficient conditions for a created substance's being an immediate and *per se* cause of y at t are said to be met by

the simple fact of its being an immediate and *per se* cause of *y* at *t* combined with God's being an immediate and *per se* cause of *y* at *t*, then one or the other of these conditions are superfluous. That is, the created substance is either self-sufficient in the immediate production of *y* at *t*, or God's action is both necessary and sufficient for it. In either case, concurrence, as defined, is dissolved in favor of either occasionalism or mere conservationism, depending on which condition is made superfluous.

So any contribution on the part of the created substance to meeting the minimally sufficient conditions of its being an immediate and *per se* cause of *y* at *t* must, of course, be something other than its being an immediate and *per se* cause of *y* at *t*. It must be something that, when combined with God's being an immediate and *per se* cause of *y* at *t*, fulfills the necessary and sufficient conditions for the created substance's being an immediate and *per se* cause of *y* at *t*. It is hard to see what such a contribution could be that would itself not amount to the created substance's being an immediate and *per se* cause of some *z*. According to concurrentism, a necessary condition of its being so is that God is an immediate and *per se* cause of *z*. It must then be asked what the sufficient conditions for the created substance's being an immediate and *per se* cause of *z* are. Until this question is answered, the sufficient conditions of its being an immediate and *per se* cause of *y* at *t* will not be accounted for. It cannot be the case, then, that those conditions are met by any contribution on the part of the created substance. It should now be clear that, for the same reasons, the suggestion that they are met by the action of some other created substance is also a dead end. Thus, the only adequate avenues of accounting for the necessary and sufficient conditions of a created substances being an

immediate and *per se* cause of *y* at *t* render either the divine cause or the created cause superfluous with regard to the immediate and *per se* production of *y* at *t*.

To all this, the concurrentist might simply respond, with Aquinas, that, “it is not as though the effect were produced partly by God and partly by the natural agent, but the whole effect is produced by both, though in different ways, as the same effect is attributed wholly to the instrument, and wholly also to the principal agent.”⁴⁵ In other words, the preceding objections are based on taking concurrence to be a composite state of affairs, consisting of two simultaneous causal actions: that of God and that of the creature. However, divine concurrence is a single action proceeding from both God and the creature.

But it is not clear that the preceding objections necessarily depend on excluding any plausible conception of concurrence as a single action. Conceived as a single action proceeding from two agents, divine concurrence would not be immune from interrogation regarding the conditions of its procedure, especially in light of the fact that concurrentism explicitly makes both God’s causal influence and that of the created substance necessary conditions for the production of the effect. But aside from this, there are good reasons to be skeptical of the idea of a single effect proceeding wholly and immediately from two separate causes by means of a single, indivisible action.

All that we have been given to understand this idea is Aquinas’s analogy to instrumental action. Therefore, it deserves scrutiny. Despite our earlier intuition that the act is predicated of the supposit enjoying the greatest immediacy of virtue, we may now concede, for argument’s sake, that the origin of the procedure of the effect (perhaps thought of as distinct from the predication of the act) be identified with both supposit and

⁴⁵ Aquinas, S.C.G. III 70

virtue. Therefore, the wood cut, as effect, proceeds wholly and immediately from both the virtue of the carpenter and the supposit of the saw.

The justification for this view can be discovered in the reason the carpenter uses the saw at all. In order to bring about his desired effect, he needs to activate certain virtues of the saw in the suppositional immediacy that the saw bears to it. He depends on the saw for the effect as much as the saw depends on his motion for the actualization of its virtue. Here, though both are necessary for the effect, neither the agent with immediacy of virtue, nor the agent with immediacy of supposit, alone, are sufficient. Combined, however, they are sufficient, and this is why the effect can be said to proceed from both, but in different ways.

As we see, though, in the analogy that we have been given by which to understand concurrence, necessary and sufficient conditions of the production of the effect can be identified as being met separately by the two agents. Thus, the conception of concurrence to which we are invited should not pre-empt the preceding objection. Secondly, the analogy breaks down, because here, neither agent is sufficient for the production of the effect, whereas God alone is sufficient for the production of any effect. His act of producing the effect is, alone, only insufficient for its concurrence with a secondary cause. It is this that must be made coherent, and not the concurrence between a carpenter and a saw.

Aquinas affirms that production is the proper action of God alone, who is the sole cause of universal being. “Secondary agents, which are in a manner particular determinants of the action of the prime agent, have for the proper effects of their action

other perfections determinant of being.”⁴⁶ The portion attributed to natural agents is that of shaping the nature of the effect as it receives its being from God. This determination occurs in the temporal generative act, or the ‘becoming’ of the effect, as well as the act of its preservation in being.

In our example, we can think of the saw, as the instrument of the carpenter, playing a role in determining the nature of his effect. The size, shape, and sharpness of the blade, for example, will contribute to the width and texture of the cut that he makes. The motion of the carpenter’s arm, as well as all the other natural factors contributing to the effect, are to be conceived as instruments of God, determining the nature of the effect, each in their own generative or preservative manner, according to their unique virtues. Meehan understands Aquinas as attributing the same sense of determination to divine action. “Just as the divine action is determined, as it were, and limited according to the condition of the second cause in which it operates,” he writes, “so existence (proper effect of the first cause) is definitized by the determined nature which is the proper effect of the second cause.”⁴⁷

Freddoso concurs with this idea. Regarding the example of divine concurrence in the production of an armadillo, he writes:

So one and the same effect – say, our newly conceived armadillo – is from God insofar as it exists at all, i.e., insofar as it is something rather than nothing, and from its parents insofar as its being is determinate, i.e., insofar as it is an animal of the species *armadillo*. In short, the effect is undivided and yet such that both its universal or general cause (God) and its particular causes (the parents) contribute to its production in distinctive and non-redundant modes.⁴⁸

⁴⁶ Ibid III, 66

⁴⁷ Meehan 323

⁴⁸ Freddoso, (1994) 147

The central question here is whether the existence of a thing and the determination of its being are not separate effects. If so, then the division of labor between God and the secondary causes will entail that, contrary to concurrentism, there are some effects brought about immediately and *per se* by created causes of which God is not an immediate and *per se* cause.

Freddoso seems to presume that determinations of a thing's being do not themselves qualify as various effects. "For it is not difficult," he writes, "to think of examples in which various truths about the unitary effect of a cooperative action might plausibly be thought to derive primarily from one of the agents rather than another."⁴⁹ Aquinas, on the other hand, in stating, as we just saw, that, "secondary agents...have for the proper effects of their action other perfections determinant of being," implies otherwise.

Freddoso, understanding the crucial nature of the issue, poses the following questions:

What is it, exactly, for a given feature of a joint effect to be traced primarily to just one of the cooperating causes rather than the other? More fundamentally, what exactly is a 'feature', and how is it that we seem able to invoke such features without splitting the effect and thus succumbing to the first pitfall?⁵⁰

The real question, I suggest, is whether we are actually able to invoke such features without splitting the effect. What, after all, does it mean to trace a 'feature' of a joint effect to one of the cooperating causes, if not to identify which of the causes is the cause of that feature? How, then, do we avoid concluding that the 'feature' is itself an effect of that cause? Consider the following example of Freddoso's:

⁴⁹ Ibid 148

⁵⁰ Ibid 150

Suppose...I use a piece of blue chalk to draw a square on the blackboard. It seems clear that both the chalk and I count as joint immediate causes of a single effect...yet the fact that the line is blue, rather than some other color, is traced primarily back to the causal properties of the chalk as an immediate instrumental cause of the blue square rather than to any of my properties as an immediate principle cause of the blue square. By the same token, the fact that there is a square-shaped effect - rather than, say, a circular effect or no effect at all - is traced back primarily to my influence...⁵¹

The lesson to be learned from examples like this is that the category of things that are effects is not limited to the coming to be and existence of determinate substances. If the fact that the square is blue is traced to the causal properties of the chalk, then that fact is an effect of those properties. If, on the other hand, the blueness itself is traced to causal properties of the chalk, then the blueness is an effect of those properties. If the event of the acquisition, by the chalkboard, of the property of having a blue square on it is traced to the event of someone's motion, then that event is an effect of that motion.

There are a number of ways the debate over the nature of the causal relata may turn out. The point here is that, if it is traced to a cause, then it is an effect. Ultimately, the concurrentist thesis entails that every effect that has a created immediate and *per se* cause is also an effect of which God is an immediate and *per se* cause. It will not do, then, to explain the relation of concurrence between the two by tracing something to one cause, and something else to the other.

1.4 Ghazali's thesis in light of the preceding discussion: logical relations

We saw that the dialectic between mere conservationism on the one hand, and either concurrentism or occasionalism on the other hand turned on the acceptance or denial of the principle:

⁵¹ Ibid 148-149

(ESSE) Necessarily, for any created entity x and time t such that x exists at t , God gives *esse-as-such* to x at t .

We are now in a position to see that Ghazali's doctrine of the pervasiveness of divine power entails ESSE. That is, if the former is true, the latter follows. Our formulation of the former was:

For all x , if x is possible 'in itself', then x iff 1) God causes x , 2) by knowingly intending x

It will be helpful here to incorporate Froddoso's definition of giving *esse-as-such* into the formulation of the principle in order to lay out the salient concepts.

(ESSE) Necessarily, for any created entity x and time t such that x exists at t , God:

- a) is a *per se* cause of (gives *esse* to, or actualizes the distinctive properties of) x at t , and
- b) for any z such that z is either a constituent of x at t or an accident of x at t , God is a *per se* cause of z at t , and
- c) has the power to give *esse* to (actualize the distinctive properties of) any possible participated being.

The entailment of (ESSE) by Ghazali's doctrine of pervasiveness follows from the following facts:

For all x , if x obtains at t , then x at t is possible.

For any z such that z is either a constituent of x at t or an accident of x at t ,

if z obtains at t , then z is possible.

The idea couched in (ESSE) is essentially what Ghazali means to capture in specifying, in the opening occasionalist assertion, that “all temporal events, their *substances and accidents*... come about through the power of God, exalted be He.” The implications of (ESSE), then, with regard to God’s causal participation in nature are also, in their essential respects, implications of the doctrine of pervasiveness. How, then, does our formulation of Ghazali’s occasionalist thesis compare to that offered by Freddoso? Freddoso’s formulation of the essential occasionalist thesis is as follows:

(OCC) For any state of affairs p and time t , if (i) there is any substance that causally contributes to p ’s obtaining at t and (ii) no created substance is a free cause of p at t , then God is a strong active cause of p at t .⁵²

Here, “a substance S is a *free* cause of p at t only if (i) S has a rational nature, i.e., is endowed with higher intellective and volitional capacities, (ii) S is an active cause of p at t , and (iii) S ’s causally contributing to p ’s obtaining at t does not itself obtain by a necessity of nature.”⁵³ S is a strong active cause of p at t just in case it is an active cause of p at t , and “no substance distinct from S is an active cause of p at t .”⁵⁴

Ghazali’s occasionalist thesis, as we had formulated it, was as follows:

Necessarily, for all events e and times t , e occurs at t iff: God causes e at t , by knowingly intending e at t

This formulation, as it stands, lacks any specification that nothing other than God causes e at t . As we pointed out, no explicit discussion of the possibility of concurrence is found in the literature. Especially in the *Iqtisad*, Ghazali seems to operate on the presumption that the pervasiveness of divine power, as he articulates it, directly rules out

⁵² Freddoso, (1988) 83

⁵³ Ibid, 82

⁵⁴ Ibid, 80

any other causal participation. The previous chapter vindicated this presumption. Ghazali's doctrine of pervasiveness entails (ESSE), which, in turn, entails either concurrentism or occasionalism. Concurrentism having been refuted, it follows that Ghazali's doctrine of pervasiveness entails occasionalism. In light of this, we will modify the formulation of his occasionalist thesis by specifying that, "God alone causes e at t ."

Secondly, nothing yet has been said about causation on the part of created free agents. Ghazali asserts that "all temporal events" are brought about by the power of God alone. This seems to leave precious little for created free agents. We will treat of Ghazali's discussion of this issue in due order. Until then, without presuming either that there are any uncaused events, or that there are any created free causes, we will add the appropriate conditions, from Froddoso's formulation of the occasionalist thesis, to the working formulation of Ghazali's. All of this generates the following:

Necessarily, for all events e and times t , if (i) anything causes e at t , and if (i) no created thing is a free cause of e at t , then e occurs at t iff: God alone causes e at t , by knowingly intending e at t

Our use of the term "events" as opposed to "states of affairs", and "thing" as opposed to "substance" at this point, is only to keep in line with Ghazali's language as much as possible, and to avoid as much as possible, at this stage, peripheral metaphysical commitments. These sorts of issues will be addressed as they become salient to the discussion. Besides this, then, the only significant differences between (OCC) and our formulation of Ghazali's occasionalist thesis are the latter's specifications about intending and knowing.

CHAPTER TWO: CAUSATION: THE METAPHYSICAL DEBATE

2.1 Occasionalism and the metaphysics of causation

Having finished with the theological argument for occasionalism, we are now ready to embark on the question of what kind of philosophy of nature is compatible with the doctrine, by identifying the implications that follow from it in that regard. The most obvious and direct implication, of course, is that nothing besides God is a cause of anything – there are no causes in nature. This might initially lead to the expectation that a ‘Humean’ approach to causation is required of the occasionalist. After all, Hume is famous for his skeptical argument against natural necessity. However, Hume himself argued that the premises leading to skepticism about natural necessity work the same dark magic on occasionalism. The issue, then, is not as simple as it might first appear.

Occasionalism is not, itself, an account of causation, but it is a claim about what is and what is not a genuine cause. An account of causation is called for, then, if only to get to the bottom of the content of that claim. Likewise, if the project is to explore the possibility of a plausible metaphysics compatible with occasionalism, it is best to begin by focusing on its implications for the metaphysics of causation.

In what follows, we will map out the logical space in the current metaphysics of causation as a grid coordinating possibilities regarding, on the one hand, the question of the ontological status of causation, and on the other, that of the metaphysical basis of causation. Next, we will discuss the threat that the Humean epistemological argument against natural necessity poses to occasionalism, and draw the distinction between Hume’s argument and the epistemological argument occasionalism can safely avail itself of in denying causal efficacy in nature. Here, we will raise the central question, in light

of the prevalence, since Hume, of reductive analyses of causation, whether and what kind of reductive analyses of causation is compatible with occasionalism.

Next, we will discuss the challenge that the question of secondary causation represents to the doctrine of occasionalism, and how, as a consequence, the prospect of maintaining a reductive analysis of causation is made unattractive for an occasionalist, by actually making it exceedingly difficult to maintain a denial of secondary causation. We will argue that, indeed, no *existing* reductive analysis is compatible with occasionalism. This explains the motivation of the next section, where we undertake to refute some of the major reductive analyses of causation.

2.2 The logical space in the metaphysics of causation

The central issue in the metaphysics of causation is over the metaphysical basis of the causal connection. That is, what is it in virtue of which causes and effects are so related? This issue is connected to that of the metaphysical bases of causal direction and causal selection. In the former case, the question is over what it is about the causal relation that constitutes the difference between the role of cause and that of effect, and the difference, for example, between the relation holding between joint effects of a common cause and that holding between the common cause and each effect. In the latter case, the question is over the basis for the distinction, if there is any, between causes and what might be called background conditions. The most fundamental question regarding the metaphysical basis of causation, however, is over its ontological status.

In “Causation: Reductionism Versus Realism,” Michael Tooley maps out the basic possible positions regarding the question of reductionism or realism (i.e. anti-

reductionism) about causal laws and causal relations. Reductionism regarding causal laws is defined as the view that “causal laws are supervenient upon the total history of the world.” Regarding causal relations, it is the view that “causal relations between events are reducible to other states of affairs, including the non-causal properties of, and relations between, events.”⁵⁵ Tooley specifies that, in each case, he is considering the question of reducibility as a matter of logical necessity; that is, in other words, the question of the analyzability of causal concepts, or their *logical supervenience* on either the non-causal facts about the world, or some combination of the non-causal and other causal facts.⁵⁶

The question of reductionism regarding causal laws and that regarding causal relations, taken as logically independent of each other, yield four initial possibilities: 1) that causal relations are logically supervenient on non-causal properties and relations, 2) that causal relations are logically supervenient on non-causal properties and relations, along with causal laws, 3) that causal laws are logically supervenient on non-causal properties and relations, and 4) that causal laws are logically supervenient on non-causal properties and relations, along with causal relations. Tooley dubs these possibilities strong (1 and 3) and weak (2 and 4) reductionism regarding relations and laws, respectively.⁵⁷

⁵⁵ Tooley, (1990) 172

⁵⁶ Ibid, 173 Tooley’s construal of logical supervenience is as follows: “Let us say that two worlds, W and W^* , agree with respect to all of the properties and relations in some set, S , if and only if there is some one-to-one mapping, f , such that (1) for any individual x in world W , and any property P in set S , x has property P if and only if the corresponding individual x^* , in W^* , also has property P , and vice versa, and (2) for any n -tuple of individuals, x_1, x_2, \dots, x_n in W , and for any relation R in set S , x_1, x_2, \dots, x_n stand in relation R if and only if the corresponding individuals, $x_1^*, x_2^*, \dots, x_n^*$, in W^* , also stand in relation R and vice versa. Then to say that the properties and relations in set T are logically supervenient upon the properties and relations in set S is to say that, for any two worlds W and W^* , if W and W^* agree with respect to the properties and relations in set S , they must also agree with respect to the properties and relations in set T .”

⁵⁷ Ibid, 173-4

Limitations follow on how these positions can be combined. Strong reductionism regarding either causal laws or relations rules out merely weak reductionism regarding the other. Weak reductionism of one set includes the other set as a subset of the set of basic reducing terms, but if this set has already been reduced to non-causal properties and relations, then reduction of the first set to the second just is reduction to non-causal properties and relations. Thus, strong reductionism regarding either causal laws or relations implies either strong reductionism or realism with regard to the other. Likewise, Tooley points out, weak reductionism with regard to both is not an option because in that case each one is to be reduced to the other, which is ontologically incoherent.⁵⁸

We are thus left with the following possible positions worthy of serious consideration: 1) total reductionism (of both causal relations and causal laws to non-causal properties and relations), 2) total realism (of both causal relations and causal laws), 3) causal law realism and reductionism regarding relations, and 4) causal relation realism and reductionism regarding causal laws. In the last two positions, of course, real causal laws can (and probably would) be included among the elements to which causal relations are reduced, and vice versa.

Reductive analyses of causation will still differ on the question of precisely what causation is reducible to. The main approaches found in the contemporary literature fall under four general categories: Regularity (or nomological subsumption) theories, counterfactual theories, probabilistic theories, and process theories.

‘Regularity theory’ refers to a class of assorted analyses of causation in terms of invariable patterns of succession, ranging from the view attributed to David Hume to John Mackie’s sophisticated theory of INUS conditions. The counterfactual theory is the

⁵⁸ Ibid, 174

analysis of the singular causal statement as a counterfactual, understood, thanks to David Lewis, in terms of relative similarities between worlds. Probabilistic theories of causation generally attempt to analyze the causal relation as one or another form of probability-raising relation. These have been combined with counterfactual theories to account for causation in an indeterministic world, among other things. Lastly, a process theory will try to analyze the causal relation as a distinct type of observable physical process.

These theories can be indexed across the range of types of reduction discussed above (strong reductionism, weak law reductionism, and weak relation reductionism), increasing the number of possible positions. Some of these may turn out to be either logically impossible or implausible, depending on the features of the theory. Since the counterfactual theory is essentially an analysis of causal relations, it could not be construed as a form of weak law reductionism. However, it seems at first glance conceivable that one might hold a counterfactual analysis of causal relations while maintaining realism about causal laws, thus reducing causal relations to non-causal facts (facts about the relative similarities of various possible worlds to the actual) and causal laws (being a primary measure of those similarities), resulting in a counterfactual weak reductionism about relations. A Regularity theorist could be a thoroughgoing reductionist about laws and relations, reduce causal relations to non-causal relations that are themselves instances of real causal laws, or reduce causal laws to bare regularities in the emergence of real singular causal relations (a strange, but nevertheless conceivable position). A closer look might show some of these initial projections false. The point

here is just to illustrate the grid on which the logical space for reductionism about causation can be mapped.

As either weak reductionism about laws or relations entails realism about the other, the logical space for reductionism is linked to that for realism. If one maintains realism about either laws or relations, the question of what it is remains open. Tooley identifies two main options in the case of causal relations.⁵⁹ One can opt for primitivism, claiming that the causal relation is simply unanalyzable, or one can analyze the causal relation non-reductively, in terms of its theoretical explanatory role. With primitivism, there seems to be no logical obstacle to a weak reductionism of laws, or singular causal realism. However, it seems unlikely that a plausible realist analysis of the causal relation in terms of its explanatory role would be compatible with reductionism about causal laws.

2.3 Occasionalism and the metaphysical basis of causation

It would perhaps be most appropriate to open a discussion of occasionalist commitments with regard to the metaphysical basis of causation with a look at David Hume's comments on the subject. This is not only because Hume has been the major influential factor with regard to modern treatments of causation, but also because his attempt to render Cartesian occasionalism internally inconsistent holds a clarifying lesson about what an occasionalist must and must not commit to. In *A Treatise of Human Nature*, Hume argues that the very 'course of reasoning' that leads the Cartesians to deny efficacy of matter should lead them to deny occasionalism.

For if every idea be deriv'd from an impression, the idea of a deity proceeds from the same origin; and if no impression, either of sensation or

⁵⁹ Ibid, 190

reflection, implies any force or efficacy, 'tis equally impossible to discover any such active principle in the deity.⁶⁰

The Humean argument against occasionalism, then, is:

- 1) Every idea is derived from an impression.
- 2) No impression implies any force or efficacy.

Therefore, we have no idea of force or efficacy.

Therefore, we have no idea of force or efficacy as an attribute of God.

This argument rests essentially on Hume's epistemological premise, that every idea is derived from an impression. The lack of any impression that implies force or efficacy must render a global denial of the possession of any meaningful concept thereof in order to generate the conclusion. If we are truly without any such idea, then occasionalism is a meaningless doctrine; that is, nothing is really attributed to God at all in calling Him "first cause", and nothing is really denied of creation in calling Him "only cause."

Of course, there are a number of serious problems with both of the oft-repeated premises of this Humean argument, and we will target them in due course. Our purpose is to clarify just what an occasionalist is committed to in relation to an empirical argument against force or efficacy as a property of matter, or secondary causation generally. Hume writes,

Since these philosophers, therefore, have concluded, that matter cannot be endow'd with any efficacious principle, because 'tis impossible to discover in it such a principle; the same course of reasoning should determine them to exclude it from the supreme being.⁶¹

⁶⁰ Hume, (1739-40) 160

⁶¹ Ibid

The course of reasoning that Hume attributes to the Cartesian occasionalists here is as follows:

1) It is impossible to discover any efficacious principle in matter.

Therefore, matter does not have any efficacious principle.

This course of reasoning need not lead the Cartesians to deny the efficacy of God. Unlike the Humean argument, nothing here entails that we have no idea of efficacy. The first premise only states that we do not discover it in matter. It is reasonable, on the basis of this premise, to draw the conclusion that matter itself is not efficacious. One need not adopt either of the first two premises of Hume's argument in order to draw such a conclusion. Thus, while it is correct that an occasionalist cannot deny the very concept of causation, the epistemological occasionalist argument, from the premise that causation is not discovered in matter, does not turn on such a denial.

Perhaps it is more accurate to understand Hume as contending, not simply that we have no concept of causation, but that we have no logically irreducible concept of causation. That is, we have no concept of causation that is not exhaustively analyzable in non-causal terms – terms for which we can discover a corresponding impression of origin. Since reductive analyses of causation are, currently, the most prevalent and influential, the question is raised whether occasionalism is compatible with some such analysis.

A logically reductive analysis of a concept leaves no special application of it unreduced. If we maintain, for example, that the relation between x and y that is asserted in the proposition “ x caused y ” is logically reducible to some set of non-causal relations R , then we are committed to the consequence, that “ x caused y ” is true if and only if xRy ,

regardless of what instantiates the placeholders x and y , whether it is material, immaterial, created, or Creator. Any reductive analysis of causation, then, that is compatible with occasionalism, must be one that reduces causation to R such that, for all x and for all y , xRy is true if and only if y obtains and x is God. As a consequence, any such analysis would have to meet the additional task of dealing adequately with secondary causation.

2.4 Occasionalism and secondary causation

The question of secondary causation poses a serious challenge to occasionalism. The challenge is to offer a plausible explanation, not only of our habitual use of causal language to describe relations between created things (language that occurs throughout scriptural revelation), but also of the everyday experience of verifying and falsifying the presence of ‘causal’ relations between them.

We have very uniform and consistent intuitions about what sorts of natural event sequences are causal and what are not. If, for example, we witness a flame contact cotton, and the cotton burn, we connect those events in a way in which we do not connect either of them to that of a cool breeze that blows the moment afterward (or the next day, or the day before). Even if there are not any irreducibly causal relations between natural events, then, there must be something significantly different about the relations that do hold between certain pairs or groups of natural things or events, from those that hold between other such pairs in virtue of which some are causally associated and others are not. It will not do for an occasionalist to adopt a simple blanket error theory over all statements expressing such connections, treating all such instances as equivalent in that regard. Secondary - or ‘occasional’ - causal relations constitute states of affairs quite

distinct from other, thoroughly non-causal states of affairs. It is for this reason that the occasionalist should have an interest in an explanation of secondary causation.

Such an explanation could take one of two main avenues, depending on whether the occasionalist takes secondary causation to be conceptually distinct from divine causation, or as just the same concept wrongly attributed to creatures. In the first case, secondary causation might be given a reductive conceptual analysis. In the second case, we would be limited to explaining our pattern of selectively inferring causal relations between natural things in terms of non-causal properties and relations they do have. This is an issue the occasionalist cannot ignore.

In either case, the set of non-causal properties and relations, *CR*, between creatures, that either constitutes the meaning of, or explains our attribution of, secondary causation between them must be distinct from any set *R* that might be suggested as the reducing terms of an analysis of causation in a general sense to include divine causation. Furthermore, *CR* and *R* must be distinct from each other in such a way as to make sense of the occasionalist contention that God alone is the cause of every temporal event. Keeping this distinction clear is the unenviable additional task to which any occasionalist wishing to maintain a reductive analysis of causation is forced.

None of the existing reductive accounts make such a distinction. Consider the possibility that one or another of these analyses of causation is correct. In that case, it captures exhaustively all that we mean, or ever could mean, by any causal propositions, including the one framed in the occasionalist thesis itself. This would render the content of the latter ontologically on a par with those relations between created types and individuals alleged by the occasionalist to be only apparently causal. It is in the interests

of occasionalism, then, to show that all existing attempts at a logically reductive analysis of causation fail. In what follows, we will critically review each of the major attempts at such an analysis and show that, and why, this is the case.

2.5 Failure of the Humean reductive psychological analysis (the ‘second definition’)

David Hume is widely considered to be the seminal reductionist about causation, and most of what goes by the name ‘Regularity Theory’ is certainly motivated by concerns raised in his historic treatment of the problem. This chapter will address fatal contradictions in Hume’s theory of causation, internal to the analysis itself, the epistemological theory that serves as the primary argumentative basis for the analysis, and also between the two. The concern here is by no means historical or interpretive, and it may well be argued that I have misread or misunderstood Hume. Though I doubt that that any plausible corrected reading could save Hume from all the issues raised here, it is really only relevant to our present purpose whether a consistent interpretation of Hume could be had on which he remains a reductionist about causation. My aim in exposing the problems in Hume’s reduction of causation is just to shake the confidence that many philosophers seem to have that Hume had ‘the last word’ on the general question of realism or anti-realism about causation; that is, to strike reductionism at the foundation.

What has become known as the copy theory of meaning is essentially the guiding principle of all Hume’s philosophy, and in particular, of his pronouncements regarding causal notions. It is on this basis that he prescribes his method of analyzing them by stating, “‘Tis impossible to reason justly, without understanding perfectly the idea concerning which we reason; and ‘tis impossible perfectly to understand any idea,

without tracing it up to its origin, and understanding the primary impression from which it arises.”⁶² This method, in turn, leads to one of the fundamental pillars of Hume’s theory of causation: the claim that, “the simple view of any two objects or actions, however related, can never give us any idea of power, or of a connection between them.”⁶³

The guiding premise here is that every idea has its origin in a ‘primary impression’. Any adequate critique of Hume’s theory of causation, then, must include an examination of that claim, and the theory in which it is embedded. Such an examination will reveal that the copy theory of meaning cannot coherently ground his theory of causation. Not only is the theory itself fatally flawed, but the argument Hume offers in its favor runs into direct conflict with key elements of the theory of causation that he builds on it.

The copy theory is articulated in the beginning of the *Treatise* as the ‘general proposition’, “...That all our simple ideas in their first appearance are deriv’d from simple impressions, which are correspondent to them, and which they exactly represent.”⁶⁴ Ideas and impressions, for Hume, are jointly exhaustive of the kinds of “all the perceptions of the human mind,” differing only with regard to “the degrees of force and liveliness, with which they strike upon the mind, and make their way into our thought and consciousness.”⁶⁵

Those perceptions, which enter with most force and violence, we may name *impressions*; and under this name I comprehend all our sensations, passions, and emotions, as they make their first appearance in the soul. By *ideas* I mean the faint images of these in thinking and reasoning; such as,

⁶² Hume, (1739-40) 74-5

⁶³ Ibid 166

⁶⁴ Ibid 4

⁶⁵ Ibid 1

for instance, are all the perceptions excited by the present discourse, excepting only, those which arise from the sight and touch, and excepting the immediate pleasure or uneasiness it may occasion.⁶⁶

Hume makes the further distinction between ‘simple’ and ‘complex’ impressions as follows:

Simple perceptions or impressions and ideas are such as admit of no distinction nor separation. The complex are contrary to these, and may be distinguished into parts. Tho’ a particular color, taste, and smell are qualities all united together in this apple, ‘tis easy to perceive they are not the same, but are at least distinguishable from each other.⁶⁷

The upshot of the ‘general proposition’, then, is that all our perceptions that ‘admit of no distinction nor separation’ into parts, and that are ‘faint images of these [impressions] in thinking and reasoning’ originate from those perceptions that also ‘admit of no distinction nor separation’ into parts, ‘enter with most force and violence’, and have the distinction of being those perceptions of which the former are ‘faint images’. It should be clear that, in distinguishing ideas as faint images of impressions, Hume has built the presupposition of the truth of the general proposition into his very definition of ‘idea’ from the outset.

If we eliminate any such presupposition from his distinction between impression and idea, we are left with nothing to distinguish the two other than the varying degrees of ‘force and violence’ with which they ‘enter’. This leaves us with the troubling question of just how much force and violence a perception must enter with in order to be an impression, as opposed to a mere idea. Perhaps if the general proposition could be

⁶⁶ Ibid

⁶⁷ Ibid 2

established on independent grounds, the fact that members of one class of perceptions bear the relation of being ‘faint images’ of the other could be retained as the distinguishing feature between them.

Hume offers a single argument for the general proposition, and then describes what he claims to be the only possible method of its refutation. I call this the only argument Hume offers for the general proposition for the simple reason that all the other observations he makes in its favor (e.g. that a congenitally blind person cannot form the idea of a color, or that “we cannot form to ourselves a just idea of the taste of a pineapple, without having actually tasted it”⁶⁸) focus specifically on ‘ideas’ that just are memories of sensible qualities. These may be enough to establish that we cannot have memories of impressions that we have never had, but that does not show that *all* simple ideas are derived from impressions.

The argument in question is based on Hume’s observation that “all simple ideas and impressions resemble each other,” differing only in the “degree of force or vivacity.” That is, “every simple impression is attended with a correspondent idea, and every simple idea with a correspondent impression,”⁶⁹ and:

From this constant conjunction of resembling perceptions I immediately conclude, that there is a great connexion betwixt our correspondent impressions and ideas, and that the existence of the one has a considerable influence upon that of the other. Such a constant conjunction, in such an infinite number of instances, can never arise from chance; but clearly proves a dependence of the impressions on the ideas, or of the ideas on the impressions.⁷⁰

The dependence, Hume argues, is evidently that of the ideas on the impressions, as “the simple impressions always take the precedence of their correspondent ideas, but

⁶⁸ Ibid 5

⁶⁹ Ibid 2-4

⁷⁰ Ibid 4-5

never appear in the contrary order.” “The constant conjunction of our resembling impressions,” he writes, “is a convincing proof that the one are the causes of the other; and this priority of the impressions is an equal proof, that our impressions are the causes of our ideas, not our ideas of our impressions.”⁷¹

As it stands, the argument seems to depend on the premises that: 1) constant conjunction amounts to proof of a causal connection, and that 2) temporal priority amounts to proof of causal priority. But as is well known, one of Hume’s central discoveries in relation to causation is precisely the fact that 1) is false. “For it [constant conjunction] implies no more than this, that like objects have always been placed in like relations of contiguity and succession...”⁷²

In spite of the contradiction between these claims, the level of confidence that Hume places in the premise in question is evident in his implication that the only possible refutation of his argument for copy theory lies in disputing its first premise, i.e. the observation that ‘every simple impression is attended with a correspondent idea, and every simple idea with a correspondent impression’.

But if any one should deny this universal resemblance, I know of no way of convincing him, but by desiring him to shew a simple impression, that has not a corresponding idea, or a simple idea, that has not a corresponding impression. If he does not answer this challenge, as ‘tis certain he cannot, we may from his silence and our own observation establish our conclusion.⁷³

Hume’s certainty of the impossibility of meeting this challenge notwithstanding, if it is made in good faith, then the implication would be that if one were to produce an example of a simple idea that has not a corresponding impression, the general proposition

⁷¹ Ibid 5

⁷² Ibid 88

⁷³ Ibid 4

would be sunk. Then if one were to respond to the production of an example of such an idea merely by concluding, on the basis of the absence of a corresponding impression, that the idea is actually no idea at all, one would be clearly cheating. That is, since the general proposition wholly depends on the general observation that there are no simple ideas without corresponding impressions, it cannot be employed as a litmus test for determining whether one does or does not have an idea by looking to see whether there is or is not a corresponding impression. But we find that this is precisely the move Hume makes in the case of causation, for example, in claiming that “as we have no idea, that is not deriv’d from an impression, we must find some impression that gives rise to this idea of necessity, if we assert that we have really such an idea.”⁷⁴ Instead, he should say, “we should find no idea that is not derived from an impression, if we assert that we really have no such idea.”

Thus far, I have shown that Hume’s argument for the copy theory (the argument from constant conjunction) is ultimately inconsistent with a central feature of the argument leading to his definitions of ‘cause’ (i.e., the claim that constant conjunction is no proof of a causal relation), despite the fact that the argument itself rests on the copy theory. Furthermore, since the derivation of ideas from impressions is taken as a causal notion (as the constant conjunction argument makes clear), the copy theory itself is inconsistent with reductionism about causation.

We entered the discussion of Hume’s argument for the general proposition via the question of whether or not, if the general proposition could be established otherwise than by simply defining ideas and impressions so as to make it true, the fact that the former bear the relation of being ‘faint images’ of the latter could be retained as the

⁷⁴ Ibid 155

distinguishing feature between them. We are now in a position to see that the argument that Hume does offer in favor of the general proposition, even if sound, could not yield a relationship between impressions and ideas that would suffice to underwrite a clear distinction between the two (beyond the woefully inadequate reference to their varying degrees of ‘vivacity’).

Were this to work, we would have to re-run Hume’s argument for the general proposition without presupposing anything other than the variation of forcefulness and vivacity of perceptions left over from Hume’s account once we ‘bracket out’ the idea that is in question – that of simple ideas being ‘faint images’ of simple impressions. That means the first premise of Hume’s argument must observe simply that every perception is accompanied by a correspondent perception that resembles it in all respects except that the first enters with more force and vivacity than the second. Ultimately, the conclusion of the argument can only be that every perception entering with some lesser degree of force and vivacity is derived from some perception entering with a greater degree of force and vivacity.

But degrees of force and vivacity are relative. No independent determination could be made, on the basis of this feature alone, as to which perceptions are to be considered derivations (ideas) and which would be originals (impressions). The logical conclusion, as far as this goes, would be that every perception is derived from some other perception of greater force and vivacity. This is not helpful for the copy theory. The argument for the general proposition cannot work without a clear, non-relative distinction between the terms ‘idea’ and ‘impression’ in hand to begin with. Such a distinction cannot rest merely on the basis of relative differences in degrees of force and vivacity

between perceptions. As we saw, the only other basis for such a distinction that Hume offers depends, itself, on the argument for which it is required. Without a clear distinction between impressions and ideas, the copy theory – the foundation of Hume’s theory of causation - is not only inconsistent with the latter; it is incoherent in its own right.

Consider the possibility of reconciling the causal implications in the copy theory to Humean reductionism by trying to understand them in just “Humean” terms. That is, a defender of Hume might claim that what is meant in this case is nothing over and above the much less robust set of properties into which Hume ultimately analyzes the causal relation. Hume actually offers two definitions of cause, which he claims “are only different, by their presenting a different view of the same object, and making us consider it either as a *philosophical* or as a *natural* relation; either as a comparison of two ideas, or as an association betwixt them.”⁷⁵

Cause, considered as a philosophical relation, or a comparison of two ideas, is defined as:

An object precedent and contiguous to another, and where all the objects resembling the former are plac’d in like relations of precedency and contiguity to those objects, that resemble the latter.⁷⁶

Considered as a natural relation, or an “association betwixt” ideas:

A cause is an object precedent and contiguous to another, and so united with it, that the idea of the one determines the mind to form the idea of the

⁷⁵ Ibid 170

⁷⁶ Ibid

other, and the impression of the one to form a more lively idea of the other.⁷⁷

Understood according to Hume's second definition of cause, the claim that ideas are caused by impressions means simply that there is a constant conjunction between impressions and ideas such that "the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other." In other words, Humean epistemology is itself purely psychological - nothing but habitual association! This result, appealing perhaps to Humeans of a skeptical bent, is nevertheless still plagued with hidden causal realist implications.

We are told that the cause is 'precedent and contiguous to another *and* so united with it', implying that such unity is something over and above just priority and contiguity. We might think this something is just the repetition of the same relation between like objects described in the first definition, were it not for the fact that in this case the objects are so united that 'that the idea of the one determines the mind to form the idea of the other', etc. We are thus presented with what initially appear to be two distinct causal relations lurking within the second definition. There is a causal relation between this 'unity' of the objects, and the event (of which this unity seems to be the cause) of the idea of the one object *determining* the mind to form the idea of the other. Secondly, this determining of the mind (by the idea of the first object) to form the idea of the other is itself a causal relation.

An insistent Humean might yet press the issue, claiming that every causal implication can and must be read in purely "Humean" terms, including the idea that constant conjunction causes the development of a habit of association. But what would a

⁷⁷ Ibid

“Humean” reading of that relation yield? Take the statement, “The constant conjunction of A and B causes the mind to habitually associate A with B.” Employing the “Humean” analysis on the basis of the second definition would render the following. ‘The constant conjunction of constantly conjoined events and formations of habits of associating these events causes the mind to habitually associate the constant conjunction of events with the habitual association of events.’ The problem here should be immediately evident. The causal notion reappears in the re-reading, and to continue reading it in Humean terms will lead to an infinite regress. Constant conjunction has been cast as playing the explanatory role with regard to association, but the explanatory link cannot be a causal one even if the causal relation is understood as habitual association, because it is precisely that which is to be explained. Either the explanation of habitual association in terms of constant conjunction is not a ‘causal’ explanation at all, or habitual association is explanatorily basic.

If the explanatory link between constant conjunction and habitual association is not causal, then can it be analytic? In this case, ‘constant conjunction’ and ‘habitual association’ will be logically equivalent. Constant conjunction and habitual association will just be identical, the explanation in this case breaking down the meaning of the term ‘habitual association’ in terms of constant conjunction, which, following Hume, consists of simple enough items – contiguity, priority, repetition, resemblance, etc.

At first glance, this looks hopeful, as it promises to dissolve the causal implication lurking in Hume’s characterization of association. “The idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively impression of the other” will just mean that ‘the idea of the one is constantly conjoined to

the idea of the other, and the impression of the one is constantly conjoined to a more lively idea of the other.’ This however, is just to identify constant conjunction with habitual association generally, and is not a specific enough link to salvage the explanatory role constant conjunction is supposed to play in Hume’s definition.

Translated in these terms, Hume’s definition would be the following:

“A cause is an object precedent and contiguous to another, and so united [i.e. constantly conjoined] with it, that the idea of the one is constantly conjoined to the idea of the other, and the impression of the one to the more lively idea of the other.”

Here, the constant conjunction between a pair of objects is to be explanatory of a constant conjunction between ideas of those objects, and / or between impressions of one of the objects and lively ideas of the other. These conjunctions cannot be logically equivalent, unless objects, impressions, and ideas are logically equivalent. Objects can be interpreted in Humean terms as ‘bundles of impressions’ perhaps. An impression of a bundle of impressions is arguably just that bundle. What, then, of the idea of that bundle? To make them logically equivalent would be just to concede the collapse of the copy theory of meaning entirely. There is no hope, then, of saving the game by taking as analytic the explanatory link between constant conjunction and habitual association posited by the Humean definition of cause.

Then what if we were to just drop the idea that constant conjunction plays any explanatory role at all, taking habitual association as explanatorily basic? This would require yet another reading of the Humean definition, where causation will be defined simply as constant conjunction *plus* association (not association *explained by* constant conjunction):

“A cause is an object precedent and contiguous to another, and constantly conjoined with it, *and where* the idea of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other.”

But to take the fact that an idea or impression determines the mind to form the idea of the other as explanatorily basic is still just to postulate an irreducible causal relation between them. We now know where any attempt to reduce this in terms of Hume’s second definition of causation will lead: namely, in circles. The relation is itself contained in the reductive analysis. But Hume’s second definition is not our only option.

We could understand this causal relation in the terms set out by his first definition of cause as “an object precedent and contiguous to another, and where all the objects resembling the former are plac’d in like relations of precedency and contiguity to those objects, that resemble the latter.” In this case, we would simply understand association as constant conjunction, as before, but without attempting to maintain the explanatory relationship originally couched in Hume’s second definition.

This would result in the following translation of the full second definition of cause:

“A cause is an object precedent and contiguous to another, and where the idea of the one is precedent and contiguous to the other, and all ideas resembling the former are plac’d in like relations of precedency and contiguity to those ideas that resemble the latter; and the impression of the one is precedent and contiguous to a more lively idea of the other, and all impressions resembling the former are plac’d in like relations of precedency and contiguity to more lively ideas that resemble the latter.”

This effectively eliminates all the causal implications stemming from the element of habitual association in the second definition by interpreting them all in terms of constant conjunction. However, it does not simply collapse the second definition into the first. The role of 'cause' here essentially involves constant conjunction not only between the 'cause' and its 'effect', but also between ideas of the 'cause' and ideas of the 'effect', as well as between impressions of the 'cause' and more lively ideas of the 'effect'. Anything that can be a cause must therefore be able to fulfill this role.

Habitual association was described as a causal relation between an idea and the formation of another idea, and between an impression and the formation of a more lively idea. Impressions and ideas, then, must be capable of fulfilling the role of cause as defined here, if this definition of the causal role implicit in habitual association is to succeed. That is, 'impression' and 'idea' must both be interchangeable with 'object' in the definition, without problematic implications.

According to our revised definition, for an idea to be a cause of another idea, not only must it be constantly conjoined to the latter, but the idea of the former idea must be constantly conjoined to the idea of the latter idea, and the impression of the former idea to a more lively idea of the latter idea. Consequently, we must have ideas of ideas, impressions of impressions, and more lively ideas of impressions. Likewise, an impression as cause yields ideas of impressions, impressions of impressions, and more lively ideas of impressions. Some of these are more problematic than others, in particular impressions of ideas and impressions of impressions. Ideas of impressions follows closely behind, suggesting the correlative problem that the definition appears geared to

entail ideas of ideas of ideas, impressions of impressions of impressions, and so on, without any foreseeable limit.

To this, the following reply can be made. The definition need not be interpreted so as to make it a necessary condition, for a thing to be a cause, that there be an idea, impression, and lively idea of it. It is only a necessary condition for a thing's being a cause that if there were an idea, impression, or more lively idea of it, then it would be constantly conjoined with the appropriate conjunct. The logical form of the definition will be as follows:

$\forall xy$ x is a cause of y iff:

$$\{\exists xy (Cxy) \ \& \ \forall wz [(Iwx \ \& \ Izy) \rightarrow (Cwz)] \ \& \ \forall st[(Esx \ \& \ Mty) \rightarrow (Cst)]\}^{78}$$

In this case Hume's phrase, "the idea of the one determines the mind to form the idea of the other" is taken as a universally generalized material conditional, with no existential implications. In this way, for example, the definition can accommodate an idea as cause without entailing the existence of ideas of, and impressions of, ideas. Since there are no such things, the antecedents of both conditionals will be false, so the conditionals themselves will be true, and the conditions for the idea's being the cause of another would be met, just as long as it is constantly conjoined with it.

But there is another problem here. In this case, it would be possible that there be two things, of which an idea has been formed of neither, and of which the one is the cause of the other. This by itself is an advantage, but it follows from Hume's first definition of cause alone. What is different about this modified second definition is that it implies that, were an idea to be formed of the two objects and yet not be conjoined,

⁷⁸ Where C = "is constantly conjoined with", I = "is an idea of", E = "is an impression of", and M = "is a more lively idea of"

they would thereby cease to be causally related. It is not only possible, but it is common that we form a new idea of an existing thing without yet associating with it anything of which it is in fact a cause. It is most implausible to suggest that after we form ideas of the objects in question, but not before that, our association of the ideas is a necessary condition of their being causally related.

There are only two ways to resolve this: make our association of the ideas a necessary condition in either case, or in neither case. The first has just been ruled out as entailing, for example, that the existence of ideas of ideas, impressions of ideas, and more lively ideas of ideas are necessary conditions of an idea's causing another idea. In other words, the fact of habitual association would have absurd implications. The second way is just to discard the psychological element in Hume's second definition altogether, essentially collapsing it into the first. In this case, constant conjunction of priority and contiguity between two objects alone will be necessary and sufficient for the prior's being the cause of the latter.

The upshot of all this is that, since there is no way to reconcile the causal implications imbedded in Hume's second definition of cause to Humean reductionism about causation, the only way to so reconcile the causal implications imbedded in his copy theory of meaning is to understand the implied relations in those terms set by his first definition of cause. In other words, to say that all our ideas are ultimately derived from impressions just means that, for each of our simple ideas, there is an impression which is constantly conjoined as prior and contiguous to it.

Such a resolution, however, leaves other problems unresolved. The first is a broad issue, with implications that go beyond Hume and apply to reductionists about

causation in general. As an empirical theory of epistemology, one would want the copy theory to establish an evidential link by which knowledge is connected to experience. Understood on the basis of Hume's first definition of cause, which would reduce the causal relation to constant conjunction, the copy theory makes this evidential link nothing over and above regular priority and contiguity between impressions and ideas. This fact will not be bothersome to Humeans highly appreciative of the skeptical, phenomenalist, or subjective idealist conclusions to be drawn therefrom.

However, those reductionists about causation who are not enthusiastic about those prospects, and yet, as empiricists (broadly speaking), are persuaded by reductionism for epistemological reasons, must consider the nature of the evidential link they take to hold between experience and knowledge, such that the latter 'comes from' the former in the appropriate sense. Obviously, the nature of such a link must be consistent with reductionism (it must not involve any unreduced causal relations). Furthermore, if such reductionism is to be epistemologically motivated, the nature of the evidential link between experience and knowledge must be such that reductionism about causation either follows from it, or is at least made more plausible by it.

2.6 Power, necessity, and the motive of the psychological analysis

Another issue is the previously mentioned trouble over just how impressions and ideas are distinct types. We have already seen that the only basis for their distinction that Hume offers and that does not presuppose the truth of the copy theory, their varying degrees of 'force and vivacity', is inadequate for that function. Aside from this, there are problems squaring this view with Hume's theory of causation.

Given that the distinction between impressions and ideas is made in this way, Hume's 'find the impression' method of analysis can only be understood as a search for either a simple perception that is constantly conjoined to the idea of causation and exactly resembles it except for its greater degree of forcefulness and vivacity (in case causation is a simple idea) or a group of simple perceptions that are constantly conjoined to correspondent, but less forceful simple perceptions that together constitute the idea of causation (in case causation is a complex idea).

Hume begins this search by asking us to 'cast our eye on any two objects, which we call cause and effect', and concludes that no impression productive of the idea of causation is to be found in any of the particular qualities of such objects. The argument is that, for any particular quality, there is some object that lacks the quality, but is a cause or effect. Secondly, there is nothing "existent, either externally or internally" that cannot be considered as a cause or as an effect, and yet there is not one quality universally shared by all things.⁷⁹ The 'objects' here, to be consonant with Hume's epistemology, must themselves be taken as complexes of impressions.

Since both of these premises are universal generalizations, 'casting our eye' on any number of pairs of objects would be insufficient to garner conclusive evidence for either. We must presume that the force of the argument rests on the implicit challenge to any dissenter to produce either the quality that no object lacks, or the object that cannot be considered as a cause or effect. But since that which we can 'cast our eye on' in any case is an impression or impression complex, the most obvious suggestion of a quality that no object lacks is just that which Hume calls 'force' or 'vivacity.' That every perception possesses this quality to some degree is central to Hume's copy theory of

⁷⁹ Ibid 75

meaning. If force and vivacity are indeed sensible qualities of perceptions, then that should be exactly what Hume is looking for. Is force productive of the idea of causation? If so, then to deny that any particular quality of objects productive of the idea of causation is to be found yet again runs against the very theory that has determined the method of the investigation that yields that denial. If not, then what is ‘force’?

Hume opens his discussion of *the idea of necessary connexion* by distinguishing two separate questions.

Having thus explain'd the manner, *in which we reason beyond our immediate impressions, and conclude that such particular causes must have such particular effects*; we must now return upon our footsteps to examine that question... *What is our idea of necessity, when we say that two objects are necessarily connected together.*⁸⁰

Perhaps the fact that Hume ultimately connects these questions to a common answer accounts for the fact that their distinctness is commonly overlooked, but it is apparent that he considers to have already explained the former before even having addressed the latter. The former is an epistemological question about how we make certain sorts of inferences. The latter is a question of conceptual analysis. Though these eventually converge for Hume, an analysis of an idea is basically different than an explanation of an inferential process.

In examining the idea of necessity, Hume claims to have examined “one of the most sublime questions in philosophy, *viz. that concerning the power and efficacy of causes...*”⁸¹ The claim is consonant with his prohibition of ‘vulgar’ definitions

⁸⁰ Ibid 155

⁸¹ Ibid 156

employing synonymous terms such as “*efficacy, agency, power, force, energy, necessity, connexion, and productive quality.*”⁸²

Hume is right in pointing out the danger of merely juggling synonymous terms, but is ‘necessity’ synonymous with ‘force’, ‘power’, and ‘efficacy’? The latter three admit of variation in degree. Power is conceived as something exhibited in greater or lesser amounts. Again, Hume differentiates impressions from ideas on the basis of the fact that the former exhibit a greater amount of force than the latter. Necessity, on the other hand, does not admit of variation in degree. To say that x is necessary for y is just to say that given y, it is impossible that x not obtain. There is no sense in the idea of a condition z that is more or less necessary for y than x – the condition is either necessary or it is not. The distinction between logical and natural necessity is irrelevant to this issue. The difference here is that, in the latter case, the idea of the antecedent event occurring without the consequent is not supposed to involve a logical contradiction. It is not that natural necessity should admit of variation in degrees. That *would* be a terminological contradiction. Since force and necessity are not synonymous, it is not immediately clear that, in examining the idea of necessity, Hume has examined the question concerning the power and efficacy of causes. Nevertheless, he uses the terms interchangeably.

He uses the term ‘power’ when he puts the idea of ‘necessary connection’ to the same test he had previously put to that of ‘cause’, in arguing that we have no particular idea of it. Remembering, again, that impressions are to be different from ideas just in that the former contain more ‘force’:

⁸² Ibid 157

All ideas are deriv'd from, and represent, impressions. We never have any impression, that contains any power or efficacy. We never therefore have any idea of power.⁸³

Hume's argument that we have no general idea of power, however, seems to treat power and necessity as distinct ideas and reveals some of Hume's preconception of their relation.⁸⁴

1. "...general or abstract ideas are nothing but individual ones taken in a certain light."
2. ∴ "If we be possest, therefore, of any idea of power in general, we must also be able to conceive of some particular species of it..."
3. "...power cannot subsist alone, but is always regarded as an attribute of some being or existence..."
4. ∴ If we have any idea of power, "...we must be able to place this power in some particular being, and conceive that being as being endow'd with a real force and energy, by which such a particular effect necessarily results from its operation."
5. [The consequent of (4)] "...wou'd imply the absolute impossibility for the one object not to follow, or to be conceived not to follow upon the other."
6. There is no object that cannot be conceived not to follow upon any other distinct object.
7. ∴ We have no general idea of power.

Premise (4) treats power as a property of a single 'particular being', the idea of which requires the idea of that being possessing a 'real force and energy' that underwrites

⁸³ Ibid 161

⁸⁴ Ibid

a relation between either the being or its ‘force’, and some effect, such that the latter ‘necessarily results’ from the operation of the former. Necessity is a relation between cause and effect, and ‘force’ is a property of the cause in virtue of which that relation obtains. ‘Power’ must be considered synonymous with force here, so that our ‘placing’ the power in a particular being is just the same as our conceiving it to have a real force underwriting the necessity relation.

But premise (5) says that such a relation would imply ‘the absolute impossibility for the one...to be conceived not to follow upon the other’, making it clear that it must amount to logical necessity. The upshot of (4), then, is that any adequate idea of power as a property of an object must render the absence of some particular effect a logical contradiction. Why would Hume impose such a condition? The reason is rooted in the fact that Hume essentially identifies the idea of causation in terms of what he takes to be its epistemological function.

Hume’s investigation of causation is initially motivated by his view that it is the single relation by means of which we can make inferences, on the basis of what is immediately given in experience, to states of affairs beyond immediate experience. “‘Tis only *causation*, which produces such a connexion, as to give us assurance from the existence or action of one object, that ‘twas follow’d or preceded by any other existence or action...” and “...the only one, that can be trac’d beyond our senses, and informs us of existences and objects, which we do not see or feel, is *causation*.”⁸⁵ Causation is hereby identified at the outset by means of an essential *role* it is to play in facilitating predictions of the future and reconstructions the past on the basis of immediate sensory experience.

⁸⁵ Ibid 74

Hume goes so far as to see in this function a necessary condition of basic object permanence:

We readily suppose that an object may continue individually the same, tho' several times absent from and present to the senses; and ascribe to it an identity, notwithstanding the interruption of the perception, whenever we conclude, that if we had kept our eye or hand constantly upon it, it wou'd have convey'd an invariable and uninterrupted perception. But this conclusion beyond the impression of our senses can be founded only on the connexion of *cause and effect*...⁸⁶

Though Hume has as yet made no explicit distinction between the issue of causal relations and that of causal laws, it should be clear that only a law-like relation could perform the role he has defined. We should thus take Hume to be pursuing the question of just such a relation, and note further how the role to be played by causation has initially set the direction his investigation is to take.

Hume is concerned with the question of whether philosophical justification can be had for induction. Since induction is that for which justification is sought, such justification cannot itself be merely inductive. The argument here rests on the idea that, were inductive inference philosophically justified, it “wou'd proceed upon that principle, that instances, of which we have had no experience, must resemble those of which we have had experience, and that the course of nature continues always the same.”⁸⁷ Then we are faced with the dilemma, according to Hume, that any philosophical justification for such a ‘resemblance principle’ must rest on arguments derived either from “knowledge” or probability.

Hume’s argument, that no arguments “from knowledge” can philosophically underwrite the resemblance principle, turns on the premise that “to form a clear idea of

⁸⁶ Ibid

⁸⁷ Ibid 89

anything, is an undeniable argument for its possibility, and is alone a refutation of any pretended demonstration against it.”⁸⁸ Since we can clearly conceive a change in the course of nature, then no such change is absolutely impossible. That is, no a priori argument can establish the resemblance principle. But according to Hume, no argument from probability can establish the resemblance principle because such arguments are themselves founded on just that principle.⁸⁹ If we begin with the dilemma and the premise that probabilistic justification for the resemblance principle would be circular, then we are left with deductive justification as the only alternative for justifying the resemblance principle, and hence, induction generally. It is for this reason that Hume works from the hypothesis that any adequate facilitator of inductive inference must “imply the absolute impossibility for the one object not to follow the other, or to be conceived not to follow upon the other.” That is, philosophical justification for induction requires a necessary connection. Power is just conceived as a property of the cause in virtue of which it is necessarily connected with its effect. The adequacy that Hume is demanding of an idea of power is just its adequacy in making induction deductive. This is why he requires, of any adequate idea of power, that it render the idea of the object in the absence of its particular effect a contradiction, from which it follows that no such idea is to be had. The fact that Hume initially conceives of causation as a facilitator of inductive inference explains the fact that, when he abandons hope of a philosophical justification for induction and moves towards a naturalistic explanation of our practice of making such inferences, he is poised to identify causation with whatever does explain

⁸⁸ Ibid

⁸⁹ Ibid 90

that practice. Thus, he is led to the conclusion that causation is a psychological habit of association.

2.7 Problems with *necessary and / or sufficient condition analyses of causation*

Of Hume's two definitions of causation, then, the only one consistent with reductionism is the 'philosophical' definition: "An object precedent and contiguous to another, and where *all the objects resembling the former are one are plac'd in like relations of precedency and contiguity to those objects that resemble the latter.*" The definition, then, turns on there being a true universally generalized conditional of the following form, where A and B both name a property or properties of which, by virtue of sharing, different objects can be said to resemble each other, C names contiguity, and P names priority:

$$[\exists xAx \rightarrow \exists y (By \wedge Cxy \wedge Pxy)]$$

In this case, Hume's definition can be understood to have the following form:

$$\square \forall xy \{x \text{ is a cause of } y \leftrightarrow [\exists x\exists y (Ax \wedge By \wedge Cxy \wedge Pxy)] \wedge \textit{ceteris paribus} [\exists xAx \rightarrow \exists y (By \wedge Cxy \wedge Pxy)]\}$$

Common sense compels us to introduce *ceteris paribus* to express a set of 'normal' conditions, (N), under which the universal generalization holds. This definition, then, appears to identify A's being the cause of B as its being a sufficient condition for B, given the universal generalization. Ernest Sosa and Michael Tooley have shown that identifying the cause of an effect as the sufficient condition thereof poses serious problems.⁹⁰

⁹⁰ Sosa and Tooley, 6

The following is an adaptation of their argument to the above formulation of Hume's definition. Assuming that there is an A and a B such that A is the cause of B, on the definition in question, then 1) – 3), below, will be true. Premises 4) – 6) assume that there is an E that meets the independence conditions laid out in 5) and 6). That is, normal conditions obtaining, E's obtaining, and the fact that E implies A, alone, are not sufficient for B's obtaining contiguous and antecedent to A. Also, normal conditions, the fact that E implies A, and the fact that, under normal conditions, A implies B's obtaining contiguous and antecedent to A, alone, are not sufficient for B's obtaining contiguous and antecedent to A. The argument is that, if A being the cause of B is equivalent to its being the sufficient condition of B, then if an A is the cause of a B, any actual E such that the conditions described above are true is also a cause of B, since it can be proved to be a sufficient condition for B.

- 1) $(N) [\exists xAx \rightarrow \exists y (By \wedge Cxy \wedge Pxy)]$
- 2) $\exists x\exists y (Ax \wedge By \wedge Cxy \wedge Pxy)$
- 3) N (normal conditions obtain)
- 4) $\exists zEz$
- 5) $\sim\{\{Ez \wedge [N \wedge (\exists zEz \rightarrow \exists xAx)]\} \rightarrow \exists y (By \wedge Cxy \wedge Pxy)\}$
- 6) $\sim\{\{N \wedge (\exists zEz \rightarrow \exists xAx) \wedge (N) [\exists xAx \rightarrow \exists y (By \wedge Cxy \wedge Pxy)]\} \rightarrow \exists y (By \wedge Cxy \wedge Pxy)\}$
- 7) $\exists xAx$ (2)
- 8) $N \wedge (\exists zEz \rightarrow \exists xAx)$ (3,4,7)
- 9) $\{\exists zEz \wedge [N \wedge (\exists zEz \rightarrow \exists xAx)] \wedge (N) [\exists xAx \rightarrow \exists y (By \wedge Cxy \wedge Pxy)]\} \rightarrow \exists x\exists y (Ax \wedge By \wedge Cxy \wedge Pxy)$ (1,2,4,8)

$$10) [N \wedge (\exists zEz \rightarrow \exists xAx)] \rightarrow [\exists zEz \rightarrow \exists y (By \wedge Cxy \wedge Pxy)] \quad (1,9)$$

$$11) \exists zEz \rightarrow \exists y (By \wedge Cxy \wedge Pxy) \quad (8,10)$$

Say A causes B, on the sufficient condition analysis, normal conditions obtaining.

Suppose E obtains, and is independent in the way specified. Since normal conditions and A also obtain, then it follows that E is sufficient for A. Then E, the normal conditions, the fact that E is sufficient for A, and the fact that, under normal conditions, A is sufficient for B's obtaining contiguous and antecedent to A, are together sufficient for A and B obtaining contiguously and in the appropriate (A-B) temporal order. Since the last of those conditions does obtain, the normal conditions, along with E's being sufficient for A, are sufficient for E's being sufficient for B's obtaining contiguous and antecedent to A. Since normal conditions obtain, and E is sufficient for A, then E is sufficient for B's obtaining contiguous and antecedent to A. Thus, E causes B to obtain contiguous and antecedent to A, or as Sosa and Tooley put it, "if a fire causes some smoke, then Antarctica's being cold also causes that smoke."⁹¹ This constitutes a serious problem for the view that a cause is just a sufficient condition for its effect, given certain universal generalizations and the conditions under which they obtain. Being a sufficient condition of an effect is therefore not a sufficient condition for being a cause of it.

But Hume is actually more specific. His claim is that A being a cause of B is its being a sufficient condition for B being contiguous and immediately posterior to A. The argument we just went through, adapted to Hume's definition, shows only that, if A is a sufficient condition for B being contiguous and immediately posterior to A, then any E such that 5) and 6) are true is a sufficient condition for B being contiguous and

⁹¹ Ibid 7

immediately posterior to A, not to E. Thus, on Hume's definition, it does not follow that if A is the cause of B, then any such E is also a cause of B. But since almost anything can be shown to be a sufficient condition of B in such a case, spatio-temporal proximity rather than logical sufficiency emerges as the essential distinctive feature picking out the cause of B.

When Hume looks to the relations between the objects for the derivation of the idea of causation, it is just these two – contiguity and priority – that he claims to be 'essential' to that of causation. "We may therefore consider the relation of CONTIGUITY as essential to that of causation;" he writes, "at least may suppose it such, according to the general opinion..."⁹² In case his argument that priority is essential to causation is inadequate, Hume begs the reader for "the same liberty, which I have us'd in the previous case, of supposing it such. For he shall find, that the affair is of no great importance."⁹³

One way to interpret the claim that contiguity and priority are essential to causation is just that the two former relations are constituents of the very idea of cause. In this case, that an event (or 'object' to use Hume's term) bear the relations of contiguity and priority to another will be a logically necessary (though not sufficient) condition of it being the cause of it. The only obvious alternative is to interpret the claim as postulating that the relations of contiguity and priority are essentially involved in the process of making causal inferences. That is, not that they are constituents of the idea of a thing's being a cause, but that they are always involved in our determining that a particular thing

⁹² Hume, (1739-40) 76

⁹³ Ibid 76

is the cause of another, with the idea of cause itself being logically independent of these relations.

The issue as to how we should interpret ‘essential’ arises from the first premise of Hume’s argument regarding contiguity.

I find in the first place, that whatever objects are consider’d as causes or effects, are *contiguous*; and that nothing can operate in a time or place which is ever so little removed from those of its existence.⁹⁴

The issue centers specifically on the question of how Hume finds that causes are always contiguous with their effects. This discovery is either a priori or a posteriori. If the discovery is a priori, then for Hume (as the synthetic a priori is not an available option), the fact that causes are always contiguous with their effects must follow from what it means for a thing to be a cause. In this case, its being contiguous with its effect is a logically necessary condition, constitutive of the very idea, of its being the cause thereof. Then, a cause’s not being contiguous with its effect would be a logical contradiction.

But there is no logical contradiction in a cause not being contiguous with its effect. The moon is widely believed to have a causal effect on the behavior of the tides, and there is no contiguity between them. The remainder of Hume’s comment on this issue is that in those cases where contiguity appears absent, we commonly discover a chain of contiguous causes between the ‘distant objects’; and where we do not, we presume one.⁹⁵ But, again, we do not presume a chain of mediating objects between the moon and the tides. And even if we did, there is no logical contradiction in the absence

⁹⁴ Ibid 75

⁹⁵ Ibid

of such chain, and thus no logical necessity of contiguity to causation. If Hume means to show that contiguity is essential to causation in the sense of its being a necessary constituent in the complex idea of causation, or of its being involved in the meaning of the term, then he has failed.

If the discovery is a posteriori, then it must follow simply from the observation that all things so far considered as causes have been contiguous with their effects. In this case, contiguity will not be part of what it means to be a cause. Furthermore, it would mean that an operationally adequate account of what it means to be a cause was already available. In order that the discovery that all causes are contiguous with their effects could be made a posteriori, the observation that all observed causes have been contiguous with their effects must be possible. But in order for this observation to be possible, objects *already identified* as the causes of their effects must be observed to be contiguous with them. In order for these things to have been identified as causes, an adequate idea of what a cause is must already be in hand, independently of the idea of contiguity. Thus, not only must being a cause be logically independent of contiguity, but one must already have available an adequate idea of what it is to be a cause in order to make the discovery that they are all contiguous with their effects.

In this case, we could only interpret the discovery of contiguity's being essential to causation as that of its being essential to our process of making causal inferences. But again, in order to discover this, we must be able to check that all observed causes have been contiguous *with their effects*. This means that we must have already identified, not only particular things that are causes, but also what their particular effects are. We must

already have made inferences to causal links between them prior to the discovery that all causes are contiguous with their effects.

This, of course, only shows that a philosophical principle to the effect that all causes are contiguous with their effects is not involved in the process of our making causal inferences. Causal inference, it could be argued, is a naturalistic, not a philosophical process. It just so happens that we do not infer causal links between things unless they are contiguous. In this case, of course, a cause's not being contiguous with its effect need not involve any philosophical problem at all. There just need be no counterexamples. But there are examples. The causal link we infer between the moon and the behavior of the tides serves just as well for this purpose. These are not contiguous.

Furthermore, the Humean naturalistic account of causal inference as a psychological habit of associating event types that is caused by their constant conjunction has already been shown to be fatally incompatible with 'Humean' reductionism itself; this after an extensive attempt to save it by interpreting the unreduced causal notions implicit therein in purely 'Humean' terms. We found that, even after going to absurd lengths, these causal notions could not be evacuated without simply collapsing the 'natural' account into the 'philosophical' one. Consequently, all that is really left to consider regarding contiguity and priority is the issue of their role in the latter. So, either way we read the claim, it is false that contiguity is essential to causation.

Hume's argument that priority is essential to the cause is based completely on the following premise:

'Tis an established maxim both in natural and moral philosophy, that an object, which exists for any time in its full perfection without producing

another, is not its sole cause; but is assisted by some other principle, which pushes it from its state of inactivity, and makes it exert that energy, of which it was secretly possessed.⁹⁶

Hume infers from this maxim that 1) “any cause, which retards its operation for a single moment...is therefore no proper cause.”⁹⁷ And from this, he infers that 2) if any cause is co-temporary with its effect, then they all must be, from which would follow “the destruction of that succession of causes, which we observe in the world; and, indeed, the utter annihilation of time.”⁹⁸ One thing standing in the way of such a catastrophe, however, is the fact that the inference from 1) to 2) is invalid. It can be that different sorts of causes bear different temporal relations to their effects – some being prior and others co-temporary – without it being the case that the prior causes have retarded operations. The argument that priority is essential fails on this point alone. Besides this, however, there is the question of the maxim. Hume is uncharacteristically liberal in allowing this. Not only is he unmercifully skeptical in his treatment of much more intuitive maxims (e.g. that everything has a cause, to which present maxim seems a closely related consequent), this ‘established principle’ presupposes the reality of precisely that which he is credited with eliminating – the exertion of ‘secretly possessed’ energy.

With the failure of the only argument given by Hume that priority is essential to that of causation, we have only to ask again, is there any logical contradiction in a cause’s being co-temporary with its effect? Since there is not, then priority is also not essential to causation in the sense of being a necessary constituent of the idea, or involved in the meaning of the term. Again, as we have seen in the argument offered by Kvanvig and

⁹⁶ Ibid 76

⁹⁷ Ibid

⁹⁸ Ibid

McCann, there so some reason to believe that a cause actually cannot be prior to its effect.

Is it true that the affair is of no great importance? At this stage, it would appear to be of great importance. Both definitions of cause that Hume will ultimately offer centrally involve the relations of contiguity and priority. In each case, we are told that a cause is ‘an object precedent and contiguous to another’. At this point, of course, we are only concerned with the definition of cause as a ‘philosophic’ relation. If it is not logically necessary that a cause is prior to and contiguous with its effect, then priority and contiguity cannot precisely enter into the definition. But if we remove these terms (as they are of no great importance), then we are left with the following:

An object related to another, and where all objects resembling the former are placed in like relations to those objects that resemble the latter.

Following our previous pattern of formalization, this definition would have the following form:

$$\square \forall xy \{x \text{ is a cause of } y \leftrightarrow [\exists x \exists y (Ax \wedge By \wedge Rxy)] \wedge \textit{ceteris paribus} \\ [\exists x Ax \rightarrow \exists y (By \wedge Rxy)]\}$$

Now, all that is specified of R is 1) that it obtain between x and y, 2) that it be such that the universal generalization is true, and 3) that it be a non-causal relation or set thereof. Then, clearly there are R’s such that, on this formula, everything is a cause of everything, and others such that nothing is the cause of anything. Secondly, there is a problem with ‘resemblance’. We have used the predicate names A and B to express properties the sharing of which constitute such resemblance between individuals.

However, the question of what sorts of properties and / or relations A and B can name has

been left open. We know only that 1) they must obtain for x and y, respectively, 2) they must be such that the universal generalization is true, and 3) they must be non-causal. Suppose that A names the property of being located on Earth, B the property of being located on Mars, and R the relation of 'being on a different planet than'. Then, anything that happens on Earth will be the cause of anything that happens on Mars. The specifications of what A, B, and R can name are clearly inadequate. What is needed is a set of criteria by which those predicates name only the causally relevant properties and relations. But what makes a property or relation causally relevant?

One way of proceeding would be to conclude that the causally relevant properties and relations are those that count into a natural psychological explanation of our causal inferring. But we have seen that such a explanation is incompatible with the reductionism that motivates it. Another way would be to identify those properties that are understood to be causally efficacious, and those relations that are understood to be, or signify, causation. But then the question is just whether or not these causal features are reducible. If not, the project of a reductive analysis is simply abandoned. If so, then the question as to how such features are to be analyzed remains, along with the very issue that is at hand, of picking out the causally relevant properties and relations from the rest. The only alternative is to drop empirical properties and relations from the formula altogether, and proceed by defining cause purely in terms of the logical relations to its effect. An example was the analysis of cause simply as a sufficient condition of its effect. We saw that such an analysis is deeply problematic. Similar problems plague the hypothesis that a cause is, *ceteris paribus*, a necessary condition of its effect.

The proof of this, also offered by Sosa and Tooley, is easier to illustrate now that we can dispose of predicate names.⁹⁹ On this hypothesis, A causes B iff: 1) A and B are actual, 2) a condition C obtains, and 3) $C \rightarrow (B \rightarrow A)$. Supposing then, that A causes B, implies:

- 1) $C \rightarrow (B \rightarrow A)$
- 2) A
- 3) B
- 4) C
- 5) Z (assume)
- 6) $\sim \{ \{ B \wedge [C \wedge (C \rightarrow Z)] \} \rightarrow Z \}$ (assume)
- 7) $\sim \{ \{ [C \wedge (A \rightarrow Z)] \wedge [C \rightarrow (B \rightarrow A)] \} \rightarrow Z \}$ (assume)
- 8) $A \rightarrow Z$ (2, 5)
- 9) $[C \wedge (A \rightarrow Z)]$ (4, 8)
- 10) $\{ B \wedge [C \wedge (A \rightarrow Z)] \wedge [C \rightarrow (B \rightarrow A)] \} \rightarrow Z$ (1, 3, 5, 9)
- 11) $[C \wedge (A \rightarrow Z)] \leftrightarrow (B \rightarrow Z)$ (6,7,10)
- 12) $B \rightarrow Z$ (9, 11)

The problem here, then, is similar to the problem we saw previously with the sufficient condition analysis of cause. In this case, if A being the cause of B is its being a necessary condition of B, then, if A causes B, any Z such that 6) and 7) are true also causes B, since it can be proved that Z is also a necessary condition for B. Again, if fire causes some smoke, then Antarctica's being cold also causes that smoke.

⁹⁹ Sosa and Tooley, 7

2.8 *The INUS condition analysis of causation, causal direction, and ‘pairing’*

The most sophisticated attempts to analyze causation in terms of necessary and sufficient conditions identify the cause neither as the necessary, sufficient, nor necessary and sufficient condition of its effect. These are arguably best represented by the INUS condition analysis proposed by John Mackie and later revised by Jaegwon Kim. In what follows, we will see that the INUS condition analysis suffers from two problems: a failure to account for causal direction, and for what Kim calls the ‘pairing relation’.

In introducing the motive of his INUS theory, Mackie points out that in most cases where a cause is identified, it is not understood as either necessary or sufficient for the effect. Fire inspectors, for example, concluding that a short circuit in a certain area caused a particular fire, do not thereby claim that the short circuit was necessary or sufficient for the fire. They know well that a fire could have been started without the short circuit, and that the short circuit could have occurred without having resulted in a fire.¹⁰⁰

In saying that the short circuit caused the fire, Mackie contends, what we mean includes the notion that the short circuit was an INUS condition of the fire, that is, “an insufficient but necessary part of a condition which is itself unnecessary but sufficient for the result.”¹⁰¹ Let A represent the short circuit, and B and C represent, respectively, the presence (B) or absence (C) of conditions that, together with A, are sufficient for the fire. Then the set ABC represents a minimally sufficient condition for the fire, the sufficiency of which A is a necessary condition. While ABC is a minimally sufficient condition, it need not be necessary, for there are likely numerous other combinations of conditions

¹⁰⁰ Mackie, 33-4

¹⁰¹ Ibid 34

sufficient to bring on the fire. The necessary and sufficient condition for the fire, then, would be represented by the disjunction $[ABC \vee DEF \vee GHI \dots]$ of all the sets of minimally sufficient conditions of the fire. By representing the conjunction of terms conjoined with A in a minimally sufficient set as X, and the disjunction of all the other minimally sufficient conditions as Y, Mackie defines INUS condition as follows:

A is an INUS condition of a result P if and only if, for some X and for some Y, (AX or Y) is a necessary and sufficient condition of P, but A is not a sufficient condition of P and X is not a sufficient condition of P.¹⁰²

So, according to Mackie, statements asserting singular causal relations (e.g. ‘A caused P’) usually imply the following¹⁰³:

- 1) A is at least an INUS condition of P [i.e. there is a necessary and sufficient condition of P which has one of the following forms: (AX or Y), (A or Y), AX, A.]
- 2) A was present on the occasion in question.
- 3) The factors represented by ‘X’ (if any) in the necessary and sufficient condition for P (AX or Y) were also present on the occasion in question.
- 4) Every disjunct in ‘Y’ not containing ‘A’ as a conjunct was absent on the occasion in question (i.e. there was no over-determination, with A, of P).

There is an issue over how statements to the effect that certain conditions are necessary or sufficient for an effect are to be understood. Mackie proceeds on the

¹⁰² Ibid 35

¹⁰³ Ibid 37

premise that such statements are equivalent to universal; to say that A is a necessary condition of B is to say that all cases of B obtaining are cases of A obtaining.¹⁰⁴ This leaves the question of how to understand singular statements of necessity and sufficiency. If we understand “this short circuit was a necessary condition of this fire,” as “all cases of this fire occurring are cases of this short circuit occurring,” then there is a problem. If the latter is enough to establish former, then everything that was the case on the occasion in question becomes a necessary condition for the fire. Mackie suggests that statements like the former should, rather, be read as counterfactual conditionals (e.g. ‘if a short circuit had not occurred here, this house would not have caught fire’) that, in turn, are to be understood as condensed arguments in which the premises are simple universal propositions.¹⁰⁵

Thus, if we said that a short circuit here was a necessary condition for a fire in this house, we should be saying that there are true universal propositions from which, together with true statements about the characteristics of this house, and together with the supposition that a short circuit did not occur here, it would follow that the house did not catch fire.¹⁰⁶

If singular statements of this sort (claims of causal necessity and/or sufficiency) can indeed be understood as counterfactual conditionals that are ultimately sustained by simple universally generalized material conditionals, then the INUS condition analysis might successfully provide an analysis of singular causal relations within the general confines of a regularity theory of causation. The questions arise, then, as to whether statements of necessity and sufficiency between singular events can be understood as

¹⁰⁴ Ibid 47-8

¹⁰⁵ Ibid 48

¹⁰⁶ Ibid 49

counterfactual conditionals, and whether, in turn, these counterfactual conditionals can be understood in terms of simple universals.

Mackie's INUS condition theory also raises the question of causal direction. The simple relation of necessity and sufficiency does not include the directionality associated with causal relations. As Sosa and Tooley point out, the length of the legs of a table are, *ceteris paribus*, both necessary and sufficient for the distance between the table top and the floor. However, while we might say that the length of the legs is a causal condition of the distance, we would not say that the distance is a causal condition of the length of the legs.¹⁰⁷ This is also a problem for the INUS condition analysis, because, as Mackie observes, "given that there is a necessary and sufficient condition of A in the field, it can be proved that if A is (at least) an INUS condition of P, then P is also (at least) an INUS condition of A..."¹⁰⁸ In this case, being an INUS condition is not enough to distinguish the role of the cause from that of the effect. Mackie rejects the idea of reducing the direction of causation to the direction of time.¹⁰⁹ Thus, the direction of causation remains a problem on the INUS theory as formulated by Mackie.

Jaegwon Kim ("Causes and Events") takes up the task of clarifying the formal language Mackie uses. Since Mackie is analyzing singular causal statements, the letters he uses ('A', 'B', 'C', etc.) are to be taken as referring to individual concrete events occurring at specific spatio-temporal regions. Kim's question is how we are to understand the logical operators used to construct the complex event names (\underline{ABC} , $A \vee BC$, etc.) used in Mackie's articulation of the INUS theory. He proposes the following "systematic procedure of compounding event names parallel to the truth-functional

¹⁰⁷ Sosa and Tooley, 7

¹⁰⁸ Mackie, 51

¹⁰⁹ Ibid 50

compounding of sentences,” where ‘I’ is the description operator, and e takes as its value the individual event.¹¹⁰

$\underline{A} = (Ie) N [e \text{ occurs if and only if } A \text{ does not occur}]$;

$AB = (Ie) N [e \text{ occurs if and only if both } A \text{ and } B \text{ occur}]$;

$A \vee B = (Ie) N [e \text{ occurs if and only if either } A \text{ occurs or } B \text{ occurs}]$ ¹¹¹

As a consequence of this procedure, Kim draws the equivalence condition that “truth-functionally equivalent event names and descriptions designate the same event.”¹¹²

For example, A is the same event as $\underline{A} \vee AB$.

An INUS condition is an insufficient but necessary constituent of a minimally sufficient set of conditions for an effect P . Kim’s interpretation of the notion of a minimal sufficient condition, described by Mackie as one that contains no redundant factors, is that no subset of the constituents of the condition is sufficient for P . Kim points out that this leads to problematic consequences. If AB is a minimal sufficient condition for P , then any event C can be shown to be an INUS condition of P . “For given that AB is minimal sufficient for P ,” he writes, “it follows that $C (\underline{C} \vee A) B$ is also minimal sufficient (unless $\underline{C} \vee A$ amounts just to A , or else C alone or together with B is sufficient for P).”¹¹³ This is because, according to the equivalence condition, $C (\underline{C} \vee A)$ is equivalent to CA , but since $(\underline{C} \vee A)$ is not equivalent to A , $C (\underline{C} \vee A) B$ does not contain any redundant factors. Thus, almost anything can turn out to be the cause of P based on this logic of event descriptions, on which, as Kim observes, “no reliable inference can be

¹¹⁰ Kim, 65

¹¹¹ Ibid

¹¹² Ibid

¹¹³ Ibid, 66

made from the logical form of an event name to the ontological structure of the event named by it.”¹¹⁴

Another result of this gap between the logical form of event names and the ontological structure of events is, Kim observes, the fact that Mackie had included, in his analysis of singular causal statements, the clause (2) that the cause event, *A* must be ‘present on the occasion in question’.¹¹⁵ Given that *A* is an individual event, its existence is entailed in clause (1). The upshot is that the language in which Mackie articulates the INUS theory does not allow for the consistent interpretation of ‘*A*’, ‘*B*’, ‘*C*’, etc. as particular, concrete events. Kim proceeds to revise the theory to accommodate the particularity required of an analysis of singular causal statements, along with the generality required of such an analysis in terms of necessity and sufficiency.

Taking an event as “the exemplifying of an empirical property by an object at a time,” Kim introduces the notation ‘ $[x, P, t]$ ’.¹¹⁶ Then, he defines an INUS property as follows:

A is an INUS property of *P* if and only if there is some unique family *SAP* of sets *Si* of properties such that, for some *i*, $A \in Si$; for each *i*, *Si* \in *SAP* if and only if *Si* is minimal sufficient for *P*; and *SAP* is a necessary condition of (by which we mean that if *P* is realized some member of *SAP* must also be realized).¹¹⁷

With this, Kim sets out the following revised definition of INUS condition:

$[x, A, t]$ is an INUS condition of $[y, P, t]$ if and only if:

- i) $A(x, t), P(y, t)$;
- ii) *A* is an INUS property of *P*

¹¹⁴ Ibid 68

¹¹⁵ Ibid 69

¹¹⁶ Ibid 71-72

¹¹⁷ Ibid 72

- iii) Some set S_i in SAP containing A and at least one other property is realized on the occasion of $[x, A, t]$;
- iv) SAP contains at least one set other than S_i ;
- v) No set of properties in SAP other than S_i is realized on the occasion of $[y, P, t]$.¹¹⁸

Like Mackie, Kim takes ‘ $[x, A, t]$ caused $[y, P, t]$ ’ to mean that ‘ $[x, A, t]$ is at least an INUS condition of $[y, P, t]$ ’. The problem now, as Kim points out, lies with the proviso, in clauses iii) and v), “on the occasion of.” This has been included to express some spatio-temporal constraints on the realization of the INUS property of P , as Kim makes clear, “for the realizations of the properties in S_i in widely separated spatio-temporal regions would be irrelevant; the properties in this set must be ‘jointly realized’.”¹¹⁹ Likewise, in clause (v), we do not want to require that no other property sets in SAP are ever realized anywhere; just that none are realized within the causally relevant spatio-temporal proximity of $[y, P, t]$. But what constitutes a causally relevant spatio-temporal proximity? The spatial aspect of this question is the most difficult. Kim writes:

So there are two general problems here: first, how do we characterize generally the set of individual events which jointly cause some event? (My striking of the match and the presence of oxygen *in this room*, not my striking of the match and the presence of oxygen in Boise, Idaho, make up such a set.) And, second, how, for each cause event (or set of events) do we generally pick out its effect, and not some other event of the same kind (i.e. whose constitutive property is the same) which happens to occur at the same time?¹²⁰

¹¹⁸ Ibid 73

¹¹⁹ Ibid

¹²⁰ Ibid

This constitutes a problem for the endeavor of reductively analyzing singular causal relations in terms of necessary and/or sufficient conditions whether the universally generalized conditions that serve as the reducing terms are themselves taken as necessary (i.e. as expressing causal laws that are not reducible to the non-causal history of the world) or mere material conditionals (as regularity theory would have it). The problem here is how the universal propositions involved can themselves be thought to entail the appropriate spatio-temporal criteria to pick out the singular causal relation between concrete, spatio-temporally bound instantiations of the properties named therein. In order to have successfully reduced singular causal relations to relations between universals (however those are understood with regard to modality) such a criteria must itself be laid out in purely universal terms, and without compromising the reduction. It will not do, for example, to specify that an instantiation of a certain degree of heat occur in just the spatio-temporal proximity to an object exemplifying flammability sufficient for its causing inflammation. This brings the unreduced singular term back into the analysis. It is the causal relation that is to be explained in terms of the spatio-temporal proximity of instantiations of appropriately related universals, and not the reverse.

It is hard to see how such a criteria could be adequately provided for a general analysis of singular causal statements, given the variety of spatio-temporal constraints that, intuitively, seem to apply in evaluating different sorts of causal statements. For example, the proximity of heat to flammable material necessary for burning is quite different from that involved in evaluating the claim that a public scandal caused the loss of an election. Considering the variety of singular causal claims, it is far from clear whether spatio-temporal relations are themselves the only considerations involved in

picking out which particular cause events are so related to which particular effect events from other exemplifications of the same types. Is it simply spatio-temporal proximity that makes *this* public scandal the cause of *this* loss of an election? At the least, a single uniform set of spatio-temporal criteria cannot be imposed on the whole variety of causes and effects that turn up in our causal statements.

The best hope may be to locate the needed criteria in the universal propositions that determine *A* as an INUS property of *P*. Kim suggests that, “we can perhaps try complicating the definition of ‘the set of properties *S* is sufficient for the property *P*’ by incorporating into it appropriate relations relating the realization of the properties in *S* and the realization of *P*.”¹²¹ In a separate investigation of the same issue (1973), he writes, “If *x*’s being *F* at *t* is causally related to *y*’s being *G* at *t*’, this must be so in virtue of some relation *R* holding for *x*, *t*, *y*, and *t*’.”¹²² He then identifies three ways of proceeding in the search for such an *R*: 1) look for a single “pairing relation” for all causally related pairs, 2) let the said pairing relation differ depending on the types of related pairs, or 3) “build such a pairing relation into the cause event so that the cause is not event *x*’s being *F* at, but rather the “complex event” of *x*’s being *F* and also being in relation *R* to *y* at *t*.”¹²³ Each of these alternatives, according to Kim, suffers from what he calls the “problem of parasitic constant conjunctions.”¹²⁴ The problem is most readily apparent in regard to the second route, where the pairing relation differs depending on the related pairs. In this case, the only general restriction placed on what the pairing relation

¹²¹ Ibid 74

¹²² Kim, (1973) 228

¹²³ Ibid 229

¹²⁴ Ibid 231

can be is that it be uniquely held between at most two relata. Thus, $[a, C, t]$ causes $[b, E, t]$ if and only if there is an R such that:

- i) $Ca \wedge Eb \wedge Rab,$
- ii) $\forall xy[(Cx \wedge Rxy) \rightarrow Ey],$ and
- iii) $\forall x[(Cx \wedge Rxb) \rightarrow x=a] \wedge \forall x[(Ex \wedge Rax) \rightarrow x=b]$

The problem is that if $[a, C, t]$ is causally sufficient for $[b, E, t]$, then, for any object c , there is a property such that its being exemplified by c is causally sufficient for $[b, E, t]$.

To make this more concrete, consider this case: the object b 's being heated is causally sufficient for its expanding (here $a = b$ and the relation R can be taken as identity). Let c be an object exactly 50 miles due north of the object that is being heated. The property H in this case is the property an object has in virtue of there being another object 50 miles due south that is being heated. Moreover, given the law that all objects expand when heated, we have the law that for any object x if x has the property H , then there exists an object 50 miles due south which is expanding. From this it follows that c 's having property H is causally sufficient for b 's expanding.¹²⁵

It would be objected that a property like H cannot be properly considered constitutive of an event, as it does not constitute a real change on the part of c . The trick, here, though is to characterize the distinction between those property acquisitions that are real changes and those that are not, without resorting to causal concepts. As Kim points out, though being 50 miles from a burning barn is not an event that happens to me, being spatially contiguous to a burning barn certainly is.¹²⁶ If the above objection is to be sustained by a reductionist, then this difference must be explained otherwise than by

¹²⁵ Ibid 230

¹²⁶ Ibid 231

asserting – even tacitly - that a causal relation holds in the latter case, between the barn burning and myself, that does not hold in the former case.

The ‘problem of parasitic constant conjunctions’ affects all three of the mentioned ways of identifying a pairing relation. However, we will move on here to consider other problems. Another problem with the idea that the pairing relation differ with regard to different types of causally related pairs is that it begs the question as to what explains the fact that, for any given pair of events, one sort of relation and not another picks them out as the causally related exemplifications. Either such an explanation is possible or it is not. To assert the latter is just to abandon the project of coming to a regularity analysis of singular causation as a failed enterprise. But if there is an explanation, then it follows that, in a certain sense, there is a single pairing relation for all causally related pairs. Any such explanation would, it seems, define a functional role in virtue of which any relation that plays it is the pairing relation in the given circumstance. That is, the pairing relation is the one that picks out the causally related pairs of concrete events from among others of the same type. But in this case, we are left in the embarrassing situation having nothing to say about the pairing relation except that it picks out the causally related pairs, *and* that is not the causal relation.

In this case, we might do well to just pick a relation. We have already noticed the problems inherent in Hume’s idea that contiguity and priority are essential to causation in general. In the case of identifying a single pairing relation obtaining between all causally related pairs, it is precisely contiguity that Kim considers. There is really no more intuitive candidate for such a relation that does not itself just amount to the causal relation.

It should be remembered here that the object of our present investigation is to determine whether a regularity analysis can be had of the concept of singular causation. In this case, the pairing relation we are looking for must be such that it constitutes a necessary ingredient of the very meaning of the singular causal relation. In this case, it is irrelevant whether, as a matter of empirical fact, all causally related pairs also share the pairing relation. Now, imagine a magic ‘courteous’ cigarette lighter such that, whenever a person brings its flame near to a cigarette, it does not light the cigarette with which it is spatially contiguous, but instead causes every other unlit cigarette held by anyone within a ten-foot radius to light. You place the flame close to your cigarette, and it causes your friend’s cigarette to light. There is, then, a causal relation without the pairing relation.

Let us concede right away that such a thing is impossible. It is impossible, that is, for fire to cause burning in cigarettes at a distance and not cause burning in a cigarette to which it is contiguous. Does this say something about what causation is, or rather about fire and the natural laws governing it? Certainly we are saying something about *fire*. Hence, it could be replied to this statement that, on the contrary, it is not fire that caused the cigarettes to burn, but courtesy magic. The natural laws governing fire do not apply to courtesy magic.

Which of the following, then, is the appropriate reply? On the one hand, it can be said, “It is impossible nonetheless, because the relation of contiguity is essential to that of causation.” On the other hand, it can be said, “It is impossible nonetheless, because there is simply no such thing as ‘courtesy magic’.” It seems clear that the latter is the appropriate response. If the former reply accurately identified the reason of the impossibility of the hypothetical event, the impossibility would be evident in the very

idea's being simply incomprehensible. But what is incomprehensible is not the very idea of such a lighting-at-a-distance. Rather, it is just *how* such a thing could occur – *how* such a lighter could *work* – given that the features of the world (heat, fire, etc.) that cause burning require contiguity to do so, and the fact that there is no such thing as 'courtesy magic'.

So let us jump to the conclusion that all the features of the world in virtue of which events in the world are causally related are such that contiguity always obtains between the events so related. This amounts simply to the fact that all causally related events also bear the relation of contiguity to each other, and does not entail that contiguity is an essential constituent of the causal relation. Consequently, the failure of contiguity to serve adequately as a pairing relation that correctly tracks the causal relation between the concrete events in the case of the magic courtesy cigarette lighter entails that contiguity is not a necessary constituent of singular causation. And this is so in spite of the fact that there is no 'courtesy magic', and the assumption that contiguity does in fact always accompany the causal relation (e.g. assuming that there *is* an unobservable chain of contiguous causes between the moon and the tides). I contend that the foregoing thought experiment also allows us to safely conclude that no relation (other than, simply, causation) could adequately serve as a pairing relation for all causally related events.

With regard to the prospect of building the pairing relation into the description of the cause event, Kim offers the example of the event of a rifle shot causing the event of a death. In this case, he writes, "we could perhaps speak of a single "compound" or "composite event" of the rifle's being fired and being in relation *R* to the man."¹²⁷ While this is an interesting suggestion relevant to the issue of the structure of event descriptions

¹²⁷ Ibid 233

and the ontological structure of events, it seems to leave open the question of the nature of the pairing relation to be included therein (is the event of the rifle shot contiguous to the event of the death?). As Kim readily admits, it also suffers from the problem of parasitic constant conjunctions. None of these methods of identifying a pairing relation, then, solve what we might call the ‘pairing problem’ that plagues Kim’s revised INUS condition analysis of singular causal statements.

Furthermore, Kim’s revisions do not solve the problem of determining the direction of causation. Reformulating Mackie’s theory in terms of INUS properties does not seem to alter the fact that it can be proved that, if A is an INUS property of P, then P is also an INUS property of A. The symmetry of the relation remains unchanged in this case. Therefore, unless causal direction is reduced to temporal direction - a move that there is good reason to reject, then the INUS condition analysis continues to suffer from the problem of causal direction as well as the problem of “pairing.”

2.9 The counterfactual analysis of causation and the problem of nomological derivation

The problem of causal direction and that of pairing involve, specifically, the reduction of singular causal relations to causal laws and non-causal facts. As such, they are independent of whether or not causal laws are themselves reducible to the non-causal history of the world; emerging, as they do, in the course of ascertaining the logical relation between particulars and the universals, subsumption under which is to constitute causation between the former. Earlier, we had noted Mackie’s suggestion that singular conditional statements between particulars be understood as counterfactual conditionals,

which in turn, could be understood as condensed arguments sustained completely by universal conditionals. With a change in the way counterfactual conditionals are interpreted, this suggestion would bring us close to what is known as the counterfactual analysis of causation.

The industry standard prototype of the counterfactual theory of causation is, of course, the one developed by David Lewis (1973) and made possible by the possible world semantics for counterfactual conditionals. On this semantics, counterfactual conditionals are understood in terms of relative similarities between possible worlds. We say that a world $w1$ is *closer* to a world w than another world $w2$ in case $w1$ is more *similar* to w than $w2$. Lewis lays out the truth conditions of the counterfactual ' $A \square \rightarrow C$ ' as follows:

$A \square \rightarrow C$ is true (at a world w) iff either 1) there are no possible A -worlds (in which case $A \square \rightarrow C$ is *vacuous*), or 2) some A -world where C holds is closer (to w) than any A -world where C does not hold.¹²⁸

Lewis goes on to define causal dependence between particular events as counterfactual dependence between their corresponding propositions, where, for any event e , the corresponding proposition, $O(e)$, is just the proposition that e occurred.

Let c and e be two distinct possible particular events. Then e *depends causally* on c iff the family $O(e), \sim O(e)$ depends counterfactually on the family $O(c), \sim O(c)$. As we say it: whether e occurs or not depends on whether c occurs or not. The dependence consists in the truth of two counterfactuals: $O(c) \square \rightarrow O(e)$ and $\sim O(c) \square \rightarrow \sim O(e)$.¹²⁹

Causation is not the same as, but is analyzed in terms of, causal dependence. Causal dependence is not transitive. To say that e causally depends on c is to say that

¹²⁸ Lewis, (1973) 197

¹²⁹ Ibid 199

those worlds in which c occurs with e are closer to the actual world than those in which c occurs without e , and that the worlds in which neither c nor e occur are closer to the actual world than those in which e occurs without c . Say d causally depends on e . In this case, it does not follow that it thereby causally depends on c . It could still be the case that the closest worlds where c holds are all worlds where d does not. Causation, however, should be transitive. Defining a *causal chain* as a finite sequence of events such that each one causally depends on the next, Lewis concludes, "...one event is a *cause* of another iff there is a causal chain leading from the first to the second."¹³⁰

Later (1986), Lewis slightly modified the definition of causal dependence in order to equip the counterfactual analysis to analyze causation in probabilistic terms, in case the world turns out to be indeterministic. "But there is a second case to be considered: c occurs, e has some chance x of occurring, and as it happens, e does occur; if c had not occurred, e would still have had some chance y of occurring, but only a very slight chance since y would have been very much less than x ," he writes, "In this case, also, I think we should say that e depends causally on c , and that c is a cause of e ."¹³¹ That is:

Where c and e are distinct events, e causally depends on c if and only if, the chance of e 's occurring had c not occurred would have been much less than it actually was, given that c did occur.

The truth-makers of counterfactuals, again, are comparative relations of the similarity of possible worlds to the actual world. Thus, in order to determine whether a given counterfactual, $\sim AI \square \rightarrow \sim CI$, is true or not (and hence, whether AI is the cause of CI), we must know whether it is true that there is a world, w' , in which neither AI nor CI

¹³⁰ Ibid 200

¹³¹ Lewis (1986) 176

hold that is more similar to the actual world @, than any world w^* in which *AI* does not hold and *CI* does.

How is the calculation of the overall relative similarity between worlds to proceed? In his first formulation of the counterfactual analysis of causation, Lewis left that question to our intuitions of overall similarity, stipulating only that there may be ties in relative similarity, though any two worlds are comparable in that regard; and that to any world there need be no closest world. Also, of course, no world is closer to the actual world (our world) than the actual world.¹³² Since the truth conditions of counterfactuals rest on the relation of comparative similarities between worlds, the counterfactual analysis of causation itself ultimately rests on the features of worlds that determine that relationship. These fall under two general categories: matters of particular fact and laws. These two considerations, as Lewis puts it, ‘trade off’ of each other in making the determination, with particular weight placed on the contribution of the latter. “The prevailing laws of nature are important to the character of a world;” writes Lewis, “so similarities of law are weighty.”¹³³

Later (1979), Lewis offered the following more specific ranking of priorities for calculating the similarity relation:

- (1) It is of the first importance to avoid big, widespread, diverse violations of law.
- (2) It is of the second importance to maximize the spatio-temporal region throughout which perfect match of particular fact prevails.
- (3) It is of the third importance to avoid even small, localized simple violations of law.
- (4) It is of little or no importance to secure approximate similarity of particular fact, even in matters that concern us greatly.¹³⁴

¹³² Lewis (1973) 196-197

¹³³ Ibid 197

¹³⁴ Lewis (1979) 472

The general idea of the ranking is that a violation, on a world w^* , of a law that holds on the actual world ($@$), weighs *more* in the calculation of the similarity of w^* to $@$ than a difference of particular fact. Note that this idea presupposes commensurability between the ‘weights’ of differences of law and of particular fact in calculating relative similarity, such that the comparisons can be made. A big difference with regard to particular fact constitutes a greater difference than a small, local violation of a law, whereas a big violation of a law constitutes a greater difference than a big difference with regard to particular fact. That is, a difference in w that violates a law on $@$ weighs more against its similarity to $@$ than a *proportional* difference with regard to particular fact. These differences must then be comparable with regard to some feature other than their weight in the calculation of similarity – if a big difference with regard to law weighs more than a big difference with regard to particular fact, that in regard to which they are ‘big’ must be something independent of their ‘weight’.

A law of nature is a causal law. But what is a causal law? This question highlights the fact that the counterfactual theory is an analysis of singular causal relations, and not causal laws. Since the trans-world similarities in terms of which counterfactuals are analyzed are themselves measured (in large part) in terms of the causal laws governing worlds, these causal laws cannot be analyzed in terms of counterfactuals. This raises the question of how we are to understand causal laws, for which there are two options. Causal laws are some form of either necessary or contingent universal conditionals.

If causal laws are necessary, then the laws are the same in all worlds. In this case, there is no comparison of relative similarity between them in that regard – they differ

only in regard to matters of particular fact. For Lewis, laws differ from world to world.

Thus, the laws referred to in his definition of nomic dependence, below, are to be understood as contingent.

The family $C1, C2, \dots$ of propositions depends nomically on the family $A1, A2, \dots$ iff there are a non-empty set \mathcal{L} of true law-propositions and a set \mathcal{F} of true propositions of particular fact such that \mathcal{L} and \mathcal{F} jointly imply (but \mathcal{F} alone does not imply) all the material conditions $A1 \supset C1, A2 \supset C2, \dots$ between the corresponding propositions in the two families... We shall also say that the nomic dependence holds *in virtue of* the premise sets \mathcal{L} and \mathcal{F} .¹³⁵

$A1, C1$, etc., represent propositions asserting the occurrence of concrete particulars, presumably of types A, C , etc (the concrete example Lewis has in mind is where the A s represent barometer readings and the C s represent levels of atmospheric pressure). The nomic dependence between them reflects a universal generalization, contained in \mathcal{L} , that (given \mathcal{F}), $A \supset C$. If laws are contingent, then this is a material conditional. In this case, it is as true to say that \mathcal{L} and \mathcal{F} hold *in virtue of* the nomic dependence that holds between the A s and C s as it is to say that their nomic dependence holds in virtue of \mathcal{L} and \mathcal{F} . The law-propositions true in a world will all be reducible to true propositions of particular fact in that world. Therefore, the nomic dependences in a world are explained by the set of true simple propositions of particular fact in that world.

The relation between counterfactual dependence and nomic dependence, according to Lewis, is as follows:

Say that a proposition B is *counterfactually independent* of the family $A1, A2, \dots$ of alternatives iff B would hold no matter which of the A s were true – that is, iff the counterfactuals $A1 \Box \rightarrow B, A2 \Box \rightarrow B, \dots$ all hold. If the C 's depend nomically on the A 's in virtue of the premise sets \mathcal{L} and \mathcal{F} , and if in addition (all members of) \mathcal{L} and \mathcal{F} are counterfactually independent of

¹³⁵ Lewis, (1973) 200

the A 's, then it follows that the C 's depend counterfactually on the A 's. In that case, we may regard the nomic dependence in virtue of \mathcal{L} and \mathcal{F} as explaining counterfactual dependence. Often, perhaps always, counterfactual dependences may be thus explained.¹³⁶

If counterfactual dependences are explained by nomic dependences, and nomic dependences are explained by matters of particular fact, then counterfactual are explained by matters of particular fact. This, then, is where we must locate the commensurability we need in order to establish the proportionality between violations of law and differences of fact necessary to make sense of the idea that an instance of the former weighs more in the calculation of similarity between worlds than a proportional instance of the latter. Assuming that matters of fact on a world can be roughly quantified, consider two particular facts $A1$ and $C1$, of equal 'weight', that obtain on $@$ at a time t , where on $@$, the law $A \rightarrow C$ holds. Consider, then, a w' and w^* , that each differ from $@$ in virtue of a single fact at t : $\sim A1$ and $\sim C1$, respectively. We can then say that the difference between $@$ and w' , and that between $@$ and w^* are proportional inasmuch as they are both single particular facts, and that the latter weighs more against the similarity of w^* to $@$ than the former does against the similarity of w' , in virtue of its violation of the law on $@$. Thus, it is possible to make sense of the idea that violations of law weigh more against similarity than *proportional* differences with regard to matters of fact, only if we understand violations of a law on a world as equivalent to those particular facts on that world that constitute the violation, entailing, in turn, that the laws holding on a world are logically reducible to the total history of particular facts obtaining there.

Given $\sim AI \square \rightarrow \sim CI$, the question, then, is: which features of $@$ are salient in regard to its being the case that w' (where neither $A1$ nor $C1$ obtain) is closer to $@$ than

¹³⁶ Ibid 201

w^* (where CI obtains despite the absence of AI). This must become a question of what law or laws operative in $@$, and under which As and Cs are subsumed, are salient in that regard. This turn towards laws is essential for the success of the counterfactual theory because, if the similarity between worlds is measured simply by reference to the particular facts, then no counterfactual of the type in question will ever be true. World w^* , differing from $@$ with regard to a single particular fact - AI - is more similar to $@$ than world w' , which differs from $@$ with regard to two particular facts - AI and CI . It is therefore necessary to look for the law in $@$, the violation of which makes the closest world of the former type farther away than the closest world of the latter type. Here, then, are some possibilities.

1) $A \rightarrow C$

It is easy to see why this cannot be the logical form of the law on $@$ that explains the truth of $\sim AI \square \rightarrow \sim CI$. This conditional is true on both the closest w' and w^* , leaving the latter the more similar of the two to $@$, and rendering the counterfactual false.

2) $C \rightarrow A$

This law will not obtain on w^* and will on w' . Whereas w' differs from $@$ with regard to AI and CI , w^* differs with regard to AI as well as the law $C \rightarrow A$. If difference with regard to law is weightier in the calculation of similarity than difference with regard to particular fact, then w^* will be less similar to $@$ than w' , and the counterfactual comes out true. A problem however, is that in nearly all cases in which we identify one event as the cause of another, it is not the case that the former is strictly a necessary condition for the latter. Thus, we will not be able to depend on such a law as the feature of $@$ that

explains the difference in relative similarities between w' and w^* that underwrites the truth of counterfactuals ascribing causes in every such case.

Without accepting the INUS theory as a complete analysis of causation, then, we could consider whether the law, on @, that underwrites the truth of $\sim AI \square \rightarrow \sim CI$ might take the form of an INUS conditional. According to Mackie, a law in which A is an INUS condition for C will have the form $(AX \vee Y) \leftrightarrow C$. Here, A is an insufficient but necessary constituent of a set of conditions that is unnecessary but minimally sufficient for C . X represents the other constituents (if any) that, conjoined with A , form the minimally sufficient set, and Y represents a disjunction of all the other sets that are minimally sufficient for C . We might, then, suggest the following as the salient feature of @, the violation of which renders w^* less similar to @ than w' :

$$3) (AX \vee Y) \leftrightarrow C$$

AI does not obtain in w^* . In @, according to 3), AI is a necessary member of a set of obtaining conditions XI that is minimally sufficient for CI . That is, nothing obtains in the relevant time-space in @ such that sufficient conditions for CI would still be met were any member of XI removed (otherwise, of course, the counterfactual would be false - CI would have obtained even without AI). Therefore, at least one particular fact, DI , must obtain in w^* that does not obtain in @, and that does complete a set (some member of Y) that is minimally sufficient for CI . Otherwise, CI obtaining in w^* , without AI , would constitute a violation of the law of @, 3) – presumably a weightier difference than the addition of $D1$.

The closest possible w' will differ from @, again, by the absence of two particular facts: AI and CI . On the other hand, the closest possible w^* will differ from @ in virtue

of either: a) the fact that *AI* does not obtain and *DI* does, or b) the fact that neither *AI* nor $[(AX \vee Y) \leftrightarrow C]$ obtain. On a), w^* is as similar to @ as w' , rendering the counterfactual false. On b), w^* is either closer to @, or farther from @, than w' , depending on whether or not the fact that $[(AX \vee Y) \leftrightarrow C]$ does not obtain on w^* constitutes a real difference between w^* and @ over and above that represented by *AI*'s not obtaining on w^* .

On $w^*(a)$, which is closer to @ than $w^*(b)$, it is irrelevant whether or not violation of a law on @ constitutes a difference from @ over and above just the different particular fact that, on a w , falsifies the law on that world. Either way, the law in question in this case does not uphold the truth of the counterfactual. That is, its holding on @ does not explain the greater similarity between w' and @, relative to that between w^* and @, in which the truth of the counterfactual consists. The challenge for the counterfactual theorists, then, is to identify the form that a law on @ could take such that the closest w^* must be farther away from @ than some w' .

A possible move for the counterfactual theorist to save the INUS conditional as the form of the underwriting law in this case is to argue that, 1) the closest w^* to @ is the one that differs in the way described in (b), above, and that, 2) the difference from @ with regard to the law does, in fact, constitute a difference on w^* over and above the particular fact, *A1*, in virtue of which the law does not obtain. Thus, the INUS law on @ pushes the closest w^* farther away from @ than the closest w' . That is, it could be objected that the addition of *D1* to w^* in order to preserve the truth of the INUS law on that world is illegitimate, and that all the particular facts on @ besides *A1* must be held fixed on w^* .

But there seems no independent motivation for this other than to arbitrarily force w^* farther away from @ than w' . Furthermore, if it is thereafter argued that difference with regard to the law constitutes a real difference of w^* from @ over and above the single fact $A1$, this itself would count against that assertion. For if this is the case, and the difference with regard to the law weighs decisively against difference with regard to an additional fact in the calculation of trans-world similarity, then the closest to @ of the (a) and (b) versions of w^* is clearly (a), differing from @ only in virtue of $\sim A1$ and $D1$. It is that world, then, that should be compared to the closest w' in order to evaluate whether the truth of $\sim AI \square \rightarrow \sim CI$ can be maintained on the basis of the INUS law. In this case, the worlds tie with regard to similarity and the counterfactual is rendered false. On the other hand, if the difference between w^* and @ with regard to the INUS law just is nothing over and above the difference with regard to $A1$, then it seems that version (b) of w^* is actually closer to @ than w' , and again, the counterfactual is rendered false.

According to the counterfactual theory, the singular causal assertion is an assertion about relative similarities of possible worlds to the actual world. The central feature of the actual world that determines such a relation is its set of laws, understood as regularities of particular fact. We should, then, be able to articulate the logical form of a contingent law on the actual world that, when brought to bear in the calculation of relative similarities between the relevant worlds, will meet the truth conditions of the counterfactual statement that is, ostensibly, the meaning of a simple causal claim. While the preceding has not conclusively proven this to be impossible, it has laid out the task for the counterfactual theorist – the problem of the nomological derivation of counterfactuals – and has shown that it is less simple than it might initially appear. Until

this task is adequately carried out, the idea that counterfactual conditionals understood in terms of possible world semantics captures the meaning of singular causal assertions remains an article of faith.

Even were this task accomplished, other problems remain. The pairing problem, for example, that plagued the INUS theory of causation, is also a problem for the counterfactual theory. Counterfactual dependences, as we saw, are explained by nomic dependences between particular events. These dependences between particulars are explained jointly by a set of laws and a set of particular facts. The pairing problem was just the problem of deriving the correct dependence relationships between particulars from relations between universals couched in law-propositions. The counterfactual theorist will need to be able to explain, for example, why a world in which a particular short circuit in a house in New York starts a fire in a house in Los Angeles is further from @ than a world in which that short circuit starts a fire in the very house in which it occurs. If this is to be explained in terms of laws on @, then the pairing problem must be dealt with.

The problems of causal direction, pairing, and nomological derivation all involve, again, the reduction of causal relations to some form of causal laws. Now we turn briefly to the problems involved in the hypothesis that laws are logically reducible to the non-causal history of the world. Since all the reductionist theories discussed so far presuppose such a hypothesis, they also suffer from the problems involved therein.

2.10 Problems with reductionism about causal laws

A problem with reductionism about causal laws raised by Tooley (1990), that adversely affects the counterfactual theory of causation, involves the possibility of basic, uninstantiated laws. Tooley asks us to suppose that, “our world involves psychophysical laws connecting different sorts of stimulation with emergent properties of experiences,” some of which are basic, and are only instantiated in sentient beings on our earth, “so that it is a causal law, for example, that when a normal human looks at something that is a specific shade of purple, under standard conditions, that gives rise to an experience with some specific emergent property.”¹³⁷

Imagine, then, a possible world, w , where, just before the time when the first occurrence of a sentient being viewing a purple flower would have occurred, the sun explodes and destroys the planet. Is it not true in w , Tooley asks, that, had the sun not exploded when it did, a sentient being would have had an experience with the emergent property of seeing the color purple? If so, then it must be that the causal law described holds on w , even though no instances of the law obtain in that world. In this case, the causal law cannot be reducible to the history of that world. Reductionism about causal laws, then, must be false.

Note that, on the counterfactual analysis, to say that the sun’s exploding on w caused there to be no instances of the experience of seeing purple on w , is to say that, were the sun not to have exploded, there would have been such an experience. That closest possible world to w in which the sun does not explode and the purple experience occurs is closer to w than the closest such world in which the purple experience does not occur. This is supposed to be because the former world is similar to w with regard to the relevant causal law. If causal reductionism is true, then this is impossible to determine.

¹³⁷ Tooley, (1990) 176-177

Therefore, a counterfactual theory combined with reductionism about laws seems to entail that preventions of unprecedented events cannot be caused.

Say that on w^* , the sun explodes just a little later, right after a sentient being first experiences purple. Now, there is an instance, on w , of the causal law connecting a human's looking at something purple under standard conditions and the purple experience. The reductionist might say that, whereas on w , the law does not hold, it does on w^* in virtue of its instantiation there. But then, there will also be a law on w^* causally connecting the experience of purple with the explosion of the sun. Simple reductionism leaves no room for distinguishing between these instances. Consider that every event is ultimately unique, at least with regard to its spatio-temporal location. How can the reductionist avoid the implication that every single event is causally connected to every other?

In w^* (assuming its history ends with the explosion of the sun), the reductionist view makes the evidence for establishing the existence of a causal law is too easy. In the actual world, at this time, the same view makes the existence of any causal law epistemologically unjustifiable. A counterexample falsifies a law, and since reductionism simply identifies laws as regularities, the law holds just in case the regularities hold throughout the history of the world, and in virtue of nothing else. In order to know what causal laws obtain it is necessary to know the entire history of the world. Thus, there is no justification for even hazarding a guess as to what the causal laws are in the actual world, much less for determining its relative similarities to various possible worlds on the basis of those laws. This is just the problem of induction that led Hume to identify causation as a subjective, psychological associative habit. If we cannot ascertain what

regularities hold for the entire history of the world, it must be that we develop expectations based on the little of it that we do experience. We have already discussed the problem of reconciling the psychological theory with reductionism itself. The next problem, that of the common cause, deals both with the notion of regularity and association, and shows that we possess a concept of causation over and above either.

Let us consider the following scenario, involving events type A, B, and C. A and B are causally unrelated, but C is the cause of events A occurring at t_n and B occurring at t_{n+1} , spatially contiguous to A. In this case, A and B will be constantly conjoined, but causally unrelated. That is, it is not because of A that B occurs when and where it does. Rather, it is because of C that A and B occur when and where they do, and hence that they are constantly conjoined. There is no logical contradiction here. Furthermore, the scenario represents an intuitively plausible possibility; any theory that designates A as the cause of B would seek to rule it out. Clearly, then, it is logically possible that A and B be constantly conjoined, and yet not causally related. Thus, causation is not logically equivalent to constant conjunction.

This scenario also illustrates that it is possible to experience constant conjunction between A and B, and to associate the two, without there being a causal relation between them, and without our inferring one between them. So a causal relation between A and B is not logically equivalent to a habitual association of the two. Nor is the inference of a causal relation between the two equivalent to their habitual association.

This last point might provoke the reply that discovering that C is the real cause of A and B is just to begin habitually associating C with A and B. One problem here is that this cannot account for the correlative discovery that the relation between A and B,

previously believed to be causal, is actually mere conjunction. Such a discovery must involve the cessation of the inference of a causal relation between the two. Now, in this case, A will continue to be habitually associated with B, or it will not. If it will, then causal inference cannot be equivalent to habitual association.

If it will not, then some explanation is in order as to why, given that the relation of constant conjunction, which was originally supposed to be explanatory of habitual association, remains operative between A and B. Any such explanation would now have to involve something other than constant conjunction. But if this explanatory factor were to turn out to be some feature of the relations holding between C and B, it must therefore be missing in the relations between A and B, and then the causal relation, again, will be something more than constant conjunction.

This leaves two options. Either the explanatory factor here is not any feature of relations between the associated events at all, or habitual association is just explanatorily basic. The latter entails that anything and everything habitually associated are, in fact, causally related. Consequently, it was not discovered that A and B are merely conjoined and that C is the common cause. A and B were causally related and became merely conjoined effects of C; and for no reason whatsoever. The former leaves the question as to what explains our habitual association of events, if not the properties and / or relations of the events themselves. Is it the position of the stars?

This case shows that we possess a concept of causal regularity that resists reduction to simple regularities, or to a psychological effect of the observation of regularities. This is so, even in light of the very real possibility of discovering that C is not the common cause of A and B; but that there is some D that is the cause of A, B, C,

and their constant conjunction. Indeed, it is in virtue of just this possibility that causation escapes logical reduction, even if it is true that no events that we ever experience are, in reality, causally related to each other (i.e., if they are all merely constantly conjoined and the real causal factors are unknown).

2.11 A conceptual dilemma for natural necessity

Most of the preceding has dealt with the concept of causation, and the failures of reductive analyses to capture it exhaustively in terms of non-causal properties and relations, both with regard to causal laws and single causal relations. But realism about natural necessity – the view that there are irreducible causal relations operating between natural events – poses as much a threat to occasionalism as reductionism about causation.

We turn now, then, to an empirical argument for natural necessity premised on the regularity observed in nature. We will show that the hypothesis of natural necessity is incapable of playing the explanatory role the argument claims for it. On the contrary, that argument employed here in defense of realism about natural necessity better serves as an argument for occasionalism.

In *The Secret Connexion*, Galen Strawson expresses such an argument in the course of a skeptical realist interpretation of David Hume. Regarding causation, Strawson claims, “Hume believes firmly, and with overwhelmingly good reasons, in something like natural necessity.”¹³⁸ Indeed, Strawson’s own view is that philosophical justification can be supplied for this belief, via a “relative idea” of natural necessity, without trespassing the boundaries set by the skeptical epistemological position, and without resorting to Hume’s psychological explanation via ‘natural belief’.

¹³⁸ Strawson (1989), 10

Strawson realizes that the skeptical realist position will run into objections on the basis of Hume's theory of meaning, according to which the only referent we could assign to the term "necessary connection" (over and above the brute fact of regular succession) would be, "a certain unknown, inexplicable *something*".¹³⁹ Can we argue that the claim, "a certain unknown, inexplicable *something* exists", might be philosophically justified? The problem here is not only that we can't know whether or not the claim is true. Without a meaningful referent for the variable *x*, the claim itself is meaningless and therefore incapable of anything like truth, falsehood, or theoretical plausibility. If we have no idea of causal necessity, we cannot make any claims regarding it that can be either true *or* false. Strawson is prepared for this objection.

Hume holds that we can suppose and indeed firmly believe in something to exist, and have what he calls a 'relative' idea of it, on account of some relation which we take it to stand in to us, and hence refer to it, although we know nothing of its nature and have no sort of positive conception of it.¹⁴⁰

Hume writes about relative ideas regarding external objects thus: "Generally speaking we do not suppose them specifically different; but only attribute to them different relations, connexions, and durations."¹⁴¹ A relative idea of an external object, for example, might consist of some sort of 'causal' relation to our perceptions, even though we have no clear idea of what such an object is 'in itself'. What would a relative idea of causal necessity be like? Strawson gives us a definition:

¹³⁹ Hume, *Enquiry* 155

¹⁴⁰ Strawson, (1989) 12

¹⁴¹ Hume, (1739-40) 68

Similarly, to anticipate, the merely relative idea of true causal power or force in nature is: ‘whatever it is in reality which is that in virtue of which reality is regular in the way that it is.’¹⁴²

Ultimately, this relative idea of causal necessity actually uncovers a challenge for realism: a conceptual dilemma, either horn of which ultimately postulates regularity as a brute fact.

In “Hume and Thick Connexions,” Simon Blackburn rejects the notion that a relative idea of causal necessity can have ontological implications. He points out that there is good reason to be apprehensive about the possibility that a relative idea of causal necessity can even be defined without presupposing causation from the outset. The meanings of phrases like “in virtue of which” and “that which ensures” appear to already entail an idea of causation.¹⁴³ Secondly, the empty variable that a relative idea of causation presents to us can itself provide no reason why it should be instantiated as a ‘something’ rather than nothing. As Blackburn puts it, “nothing will do as well as something about which nothing can be said.”¹⁴⁴

More important for our purposes, however, is the criticism that Strawson fails to distinguish between what Blackburn refers to as a “causal nexus” and a “straitjacket”.¹⁴⁵ By ‘causal nexus’, Blackburn just means, a singular causal relation connecting object or event tokens at a specific spatio-temporal region. This says nothing about the regularity with which objects or events of a type bear the relations that they bear. Left on its own, the causal nexus itself appears as a contingent and brute fact. Our relative idea of

¹⁴² Strawson, (1989) 51

¹⁴³ Blackburn (1990), 250

¹⁴⁴ Ibid. 247

¹⁴⁵ Ibid. 241

causality, therefore, must involve a straitjacket – something that functions as a causal law enforcer throughout space-time, ensuring that object or events of types will always relate in the same regular pattern. Obviously, anything that will serve as a straitjacket must itself be something the regularity of which is completely reliable.

It has to be something whose own continued efficacy through time is subject to no possibility of change or chance of failure. For otherwise the fact that it keeps on as it does would itself be a case of coincidence or fluke, another contingency crying out for explanation and engendering inductive vertigo.¹⁴⁶

The role of our relative idea - “that in virtue of which reality is regular in the way that it is” - is clearly that of a ‘straitjacket’, assuming, that is, that the ‘way’ in which reality is regular is a *regular* way.

Strawson mounts an argument for the following view:

The objection to the Regularity theory need not just be negative. It need not be just (1) that it is absurd, given a regular world, to insist that there is definitely nothing about the nature of the world given which it is regular rather than chaotic. It may also be (2) that it is reasonable (in some perhaps irreducibly vague but profoundly unshakeable sense), given a regular world, to suppose, positively, that there definitely is something about the nature of the world given which it is regular, something which is therefore not itself just the fact of its regularity.¹⁴⁷

Note that the causal realism articulated here postulates something: 1) about the nature of the world, 2) given which it is regular, and 3) which is not itself just the fact of its regularity. This, it is claimed, is a more reasonable position, given the regularity we experience in the world, than otherwise. If this is the case, then there are good reasons to believe in natural necessity, so defined. If each alternative is equally absurd, however, then the weight of evidence rests with suspending judgment on the issue.

¹⁴⁶ Ibid.

¹⁴⁷ Strawson, (1989) 22

Strawson asks us to perform the following thought experiment. Envision a coherent, regularly ordered film sequence of normal world events appearing on a computer screen. Then, imagine that a purely random generating device is determining the color value of each pixel on the screen. The result is absurd - we would be viewing an ordered sequence of events generated by a fully chaotic mechanism. Each pixel, so well coordinated with the others in constituting a fluid and orderly sequence of regular events, is merely filling out one of countless equally probable possibilities. Now, transform the computer pixels to “reality pixels” that constitute the world, and imagine that their qualities – all real events - are determined by a sort of cosmic random generator. This scenario, Strawson claims, is analogous to the scenario implied by the notion that there is no underlying necessity in virtue of which events in the world are regular.¹⁴⁸

But this analogy is false. Regularity theory does not imply that chaos is that in virtue of which regularity occurs. It states that there is *nothing* in virtue of which regularity occurs. A scenario whereby a sort of random generator produced an ordered universe presupposes a straitjacket style of necessary connection between the generator and the events it generates. Indeed, it is precisely in light of such a connection that the scenario is absurd in the first place. Consider the supposedly less absurd scenario in which a cosmic random generator generates a completely chaotic universe. Even this scenario involves the supposition of a regular necessary connection between the generator and the universe it produces. To make the analogy reflect the Regularity theory, the “generator” would need to be removed from the picture altogether.

¹⁴⁸ Ibid 24-26

Strawson anticipates this objection by noting that, despite the gap in the analogy, the arrangement of pixels in the random generator scenario and the arrangement of the world, given Regularity theory, are probabilistically equivalent, and thus that the latter nevertheless shares all the absurdity demonstrated by the former. But the crucial difference emerges when he characterizes the nature of his objection:

This is the old ‘outrageous run of luck’ objection, but taken one simple step further: the objection is not only that the Regularity theory of causation would have to count an outrageous run of luck as a causal regularity, but that it asserts that all causal regularity actually is an outrageous run of luck.¹⁴⁹

On the contrary, what sets the Regularity theory apart from the random generator scenario is that it does not count an outrageous run of luck as a causal regularity, while the random generator scenario does. Regularity theory holds that there is *no* principle in virtue of which the regularity of events in the world is necessary. Thus, it precludes any implication that ‘luck’ functions as such a principle. The random generator scenario, on the other hand, offers a situation in which luck *is the cause* of causal regularity. Thus, it presupposes the very thing that Regularity theory denies. As to the alleged assertion that all causal regularity *is* an outrageous run of luck, if that does not mean the same thing as counting luck as a causal regularity, then what could it mean? Regularity theory is the claim that all causal regularity *is* regular succession. If “regular succession” were synonymous with “outrageous run of luck” then there would be another absurdity to address. Our relative idea of causal necessity would be “that in virtue of which there are outrageous runs of luck in the world.” The difficulties of using terms like ‘chance’ or ‘luck’ in a philosophical discussion deserve emphasis. Assigning a clear meaning can turn out to be problematic. For our purposes it is enough to understand that there is a

¹⁴⁹ Ibid 26

clear difference between defining ‘luck’ as a causal element behind ‘random’ events, and defining it as the absence of a causal element altogether. The latter amounts, in the case of regular events, to simply identifying ‘luck’ *as* regular succession (what else would it be?). This results in a tautology (‘regular succession is regular succession’) that, though uninformative, is hardly as absurd as the idea that pure chaos generates order.

The purpose here is not to argue in favor of the negative ontological conclusion regarding natural necessity, or even to show that it is not absurd. If the idea that regular succession is just regular succession is absurd, there is good reason to refrain from committing to that view. However, it would not be a sufficient reason to adopt a positive position regarding the ontological status of natural necessity unless the positive position is actually less absurd than the negative. If it turns out to be equally absurd, the only option would be to suspend judgment on the issue altogether. We can investigate this question via a modification of Strawson’s own analogy.

Let us suppose that the regularity of events in the world is actually produced by a regularity generator. Such a generator would be the referent of Strawson’s relative idea of natural necessity. It is truly an amazing mechanism, as it ensures that the regular succession of events continues throughout time. First of all, it is responsible for each “causal nexus”, as it generates every connection between every particular pair of events at every time. This means there is a causal relationship between the regularity generator and the connection. Every time the generator produces a connection from event A to event B, the production of the connection constitutes an event in the world. Call this a generator event (as opposed to the impression events we observe). Thus, the regularity

generator is characterized by a succession of generator events through which its efficacy in producing connections between impression events is made manifest.

The regularity generator, it will be remembered, must be responsible for the regular succession of events across time. It must be a “straitjacket”, generating connections between events A and B in a regular pattern. Thus, the succession of generator events must exhibit regularity. Enter the additional qualification we made, drawn from Blackburn’s insights, to our relative idea of necessary connection. In order to ensure the regular succession of events (and be the x we want it to be), the regularity generator must function regularly. How will the regularity of the regularity generator be explained? Either the regularity-generator does what it does regularly in virtue of some external principle of regularity, or “it is just regular”.

If one were to conclude that, as a regularity generator, it essentially is “just regular” then one will have fallen into the same absurdity that is apparently involved in claiming that events in the world are “just regular”. In fact, such a conclusion just is Regularity theory. It fails to meet the third condition of causal realism, that what ensures the regularity in the world is not itself the fact of its regularity. One could even draw a similar analogy to illustrate the equivalence. Imagine a regularity generator that produces necessary connections between impression events in the world. Now imagine that a purely random generator determines every connection the regularity generator produces! The claim that the regular succession of events that we do have impressions of “just *is* regular” is said to be absurd enough to prevent us from accepting that position. Surely then, the claim that a guarantor of regularity of which we have no impression or clear

idea whatsoever “just is regular” is absurd enough to convince us to suspend judgment on the matter.

If, on the other hand, the regularity generator is regular in virtue of some principle other than its own regularity, then we have what amounts to an infinite regress. We must suppose the existence of a second level regularity generator to ensure ourselves of the regularity of the first one, and this supposition just recreates the same problem. The very nature, it seems, of the function we are asking a principle of regularity “*x*” to fill (whatever that *x* might be), demands that, in accepting it as an explanation of the regularity of our impressions, we must choose between two alternatives. We must either admit to a claim that commits us to the same sort of absurdity that Regularity theory allegedly offers – “*x* just *is* regular”, or look for something that guarantees the regularity of ‘*x*’ and face the same choice again.

This dilemma is a result of a tension between two of the conditions that have been imposed on the idea of whatever it is that ensures the regularity of the world. They are: 1) that it is something about the nature of the world itself, and 2) that it is not just, at bottom, the fact of the world’s regularity. These do not appear to be compossible. Dropping the second condition amounts to taking the world’s regularity as, at bottom, a brute fact. Dropping the first amounts to postulating something that explains the world’s regularity, but is not itself something about the nature of the world itself.

Strawson’s view – by far the most common form of realism about causal necessity – is that the feature of the world that ensures its regularity is just the nature of the matter of which it is, supposedly, constituted. It is worth examining, then, whether

this hypothesis – the hypothesis of natural necessity - that meets the first condition, can also coherently meet the second.

2.12 Causal realism and the nature of matter

In “Realism and Causation”, Galen Strawson offers two versions of a realist analysis of causation that he calls the “Producing Causation” view. Both are presented as analyses of what it means “to say that one object-involving event A caused another object-involving event B.” They are as follows:

- 1) ...given the existence and the nature of the forces informing and governing the objects involved in A and B, the occurrence of A (i) produced or gave rise to or brought about and necessitated the occurrence of B.
- 2) ...A (i) produced or gave rise to or brought about and (ii) necessitated the occurrence of B: each object has a certain intrinsic nature or constitution, and it is in virtue of objects having the intrinsic natures or constitutions that they do have that they act and react, and cannot but act and react, in the regular ways in which they do.¹⁵⁰

Strawson claims that these two definitions come to the same thing, and only offers the second to accommodate philosophers uncomfortable with references to objective forces. The definitions, respectively, assign ‘objective forces’ and the ‘intrinsic nature’ of objects similar roles. Both are assigned the role of underwriting the singular event of the production and necessitation of B by A. Here, only intrinsic nature is explicitly assigned the role of underwriting the invariable regularity of the behavior of material objects; the fact that they “cannot but act and react, in the regular ways in which they do.” But Strawson also writes that “if objects have *causal powers*, they have the powers they do wholly in virtue of the nature of the forces informing (and so governing) the matter of which they are constituted,” and also that, “the phrase ‘objective forces’ is taken to be suitable as a name for that in which the existence of any *de re* physical

¹⁵⁰ Strawson (1987), 255

necessities consists.”¹⁵¹ These distinct roles – the underwriting of a causal power and that of a *de re* physical necessity – are assigned to both. The two definitions coming to the same thing represents a unification of the objective forces that govern the behavior of matter and its intrinsic nature.

Strawson is concerned both with easing tough-minded empiricists worried about the reference to ‘objective forces’ and with showing that the notion is equivalent to that of the intrinsic nature of matter. With regard to the first, he claims that, for a realist “to postulate the existence of matter and its properties is already to postulate the existence of objective forces.”¹⁵² A bit later, he makes a slightly stronger statement. “Indeed, when one talks of objective forces one is (according to the present account) really just talking about matter and its intrinsic nature or properties in a certain kind of way.”¹⁵³ Then, he offers an interesting argument that the truth of that statement follows from a proper account of the temporality of matter.

Matter, as ordinarily conceived, is essentially something that persists through time. And it is ordinarily supposed to possess certain unchanging fundamental properties as it persists through time; it is, in other words, supposed to have a certain persisting, intrinsic, stable *nature*, as it persists through time. But to postulate such non-coincidentally stable, continuant, propertied matter, as all Realists ordinarily do, is (in effect) already to have postulated the existence of forces whose existence is part of the mode of existence of matter and its properties. For what (as it were) holds matter together, as something with a (constant) nature, from instant to instant? What maintains it as something that remains qualitatively similar from instant to instant?

The answer cannot be, “Nothing at all”. For then the transtemporal qualitative similarity or stability is after all entirely coincidental, and matter cannot after all be said to possess a (more or less) stable, persisting intrinsic *nature*. So the answer must be “Something”. And the present

¹⁵¹ Ibid 255

¹⁵² Ibid 259-260

¹⁵³ Ibid 260

suggestion is that the phrase ‘objective forces’ is as good a name as any for whatever that something is.¹⁵⁴

Perhaps this argument can be broken down in the following way:

- 1) Matter has a persisting, intrinsic, stable nature (i.e. it has fundamental unchanging properties) as it persists through time.
- 2) If nothing maintains matter as something that remains qualitatively similar from instant to instant, then matter does not have a stable intrinsic nature; the persistence of its qualitative similarity through time is coincidental.

Therefore, something does maintain matter as qualitatively similar from instant to instant. ‘Objective forces’ is as good a name as any for whatever that is.

It seems intuitive that matter’s having a stable intrinsic nature involves some guarantee that it will not undergo unpredictably radical qualitative alterations in the next instant. However, if that is the case, then it could be objected that the conclusion has been already assumed true in the first premise. One could just deny that matter indeed has a stable intrinsic nature. But the force of the argument really involves the fact that it is aimed at Realists, whom Strawson claims are ordinarily committed to the first premise. If that is so, and if the fundamental properties of matter are the kind of things that require something else to underwrite their persistence, on pain of coincidence, then the argument does support Strawson’s first claim that, for Realists, “to postulate the existence of matter and its properties is already to postulate the existence of objective forces,” since that is just what matter, for a realist, would imply.

However, the argument is irrelevant to the claim that talking about objective forces just is a certain way of talking about the intrinsic nature or fundamental properties

¹⁵⁴ Ibid 260-261

of matter. In fact, the mechanism of the argument seems to imply that this is false. If the intrinsic nature of matter needs maintenance through time from objective forces in order to be stable, then it cannot just be those forces. On the other hand, if the intrinsic nature of matter just is the objective forces, then according to the argument, for realists to postulate the existence of matter is already to postulate something that maintains the persistence through time of the objective forces. Then objective forces cannot be that something. Clearly, this argument is not coherent with the view that objective forces and the intrinsic nature of matter are identical.

Strawson makes several other interesting comments to the effect that they are. He warns us against “adopting a natural but highly misleading picture of the world according to which there are (on the one hand) *objects*, possessed of certain intrinsic properties, yet in themselves inert and static, which are governed in their behaviour by *forces* (on the other hand) that are entirely external to them.” On the contrary, “matter and the forces that partly constitute its nature just do not come apart like this.” He credits this “bad, separatist” picture with fostering the prejudice that forces are less real, and more abstract, than objects, when in fact, “the objects cannot be fully described apart from the forces.”¹⁵⁵ It is clear that Strawson’s strongest view is that a metaphysics that sharply distinguishes objects from forces should be abandoned, and objective forces should be seen as irreducible necessary constituents of the intrinsic nature of matter. “To talk explicitly of objective forces after having rejected the bad separatist picture of the relation between matter and forces is just to give a certain natural characterization of an ineliminable aspect of the concept of matter-in-time.”¹⁵⁶

¹⁵⁵ Ibid

¹⁵⁶ Ibid 262

There may be reasons to prefer the view that objective forces are identical to, or essentially constitutive of, the nature of matter, to the view that they are external guarantors of the persistence of that nature. Nevertheless, on both of these views, appeal to objective forces fails to underwrite any real *de re* physical necessity over and above the brute fact of the world's regularity.

Objective forces, then, are taken to be the fundamental fact when it comes to causation. On this view, it makes no sense to speak of forces as themselves governed by laws; rather, there are any laws there are because there are the forces there are. The existence, constancy, and particular nature and strength of these forces are part of the ultimate given; they are basic, not-further explicable facts about how things are.¹⁵⁷

In other words, the objective forces just are regular. On the view that objective forces are identical or essentially constitutive of the nature of matter, this amounts to contending that nothing maintains the persistence of the nature of matter through time. This is precisely what Strawson's argument from the temporality of matter contended that realists cannot postulate of matter on the grounds that it just implies that matter has no stable intrinsic nature. If, as that argument implies, the objective forces are in fact an extrinsic guarantor of the persistence of the nature of matter through time, then it turns out that the guarantee itself just consists of the brute fact of the regularity with which those forces operate. Either way, the result is that regularity turns up as an irreducible element. So postulating objective forces does not help to underwrite *de re* physical necessities.

Importantly, an account that explains why events in the world, within observed or recorded history, have exhibited an uncanny regularity is different from an account that would explain why things have always been and will remain so without exception.

¹⁵⁷ Ibid 256

While agreeing that an adequate account of causation must capture the former fact, it is not at all obvious that it must capture the latter fact. It is doubtful that any account could capture it, given preceding considerations. Of these two facts, it is the first that forms the content of the empirical argument against reductionism. That is, we have experienced uniformity and regularity in natural events. This can be safely regarded as evident. Furthermore, the regularity we experience in nature is of such a degree that the idea that there is no underlying explanation is at least highly unlikely, and most probably absurd.

The second fact, however, is not an evident fact at all. It is, rather, a hypothesis postulated in explanation of the observed regularity. This hypothesis has two steps. The first is to explain the observed regularity by making it part of a universal pattern of regularity that obtains throughout time and space. That is, to conceive the observed events as instantiations of some system of universal conditions. In the second step, to explain these unchanging regularities (which, left as brute facts, would constitute a greater absurdity than the brute fact of the regularities that we do observe), they are postulated as *natural necessities*. Observed events are then conceived as instantiations of necessary universal conditionals.

This presents the epistemological possibility, in principle, of prediction with deductive certainty (the deductive-strength induction missed by Hume) and the expanded power of manipulating nature that it represents - a prospect that has had no small influence in the entrenchment of the general hypothesis of natural necessity in the modern mind. It also raises the question of just what it is that explains the impossibility of variation in the unchanging pattern asserted by that hypothesis. Placing the modal operator on the universal conditional no more *explains* the impossibility of its being false

than the universal conditional itself explains the regularity in what we have experienced. The hypothesis of natural necessity supposes something in nature that explains the regularity of its behavior by way of making it impossible for it to behave otherwise.

The preceding has shown the dilemma this leads to: between, on the one hand, ultimately conceding to some explanatorily basic brute regularity; and on the other, to an infinite regress of explanatory regularities (in which case regularity is still the explanatorily basic feature). This leaves us, not only in the original position of asserting that the regularity in what we have experienced is sheer coincidence, but also that a universal regularity spanning all of time and space, that we have not observed, is sheer coincidence.

2.13 Occasionalism and the regularity of nature

There is an alternative hypothesis to explain the regularity of what we have experienced, without postulating either that the regularity is universal, or that it is necessary. Consider the regularity in the behavior of a postal worker. If I were to observe him every morning, taking the same route, delivering the mail to the houses to which they are addressed, in the same order, I would experience a pattern of events so uniform that the suggestion of its being sheer coincidence would seem absurd. But the explanation of this pattern is not that it will continue for eternity and that it is impossible for things to be otherwise. As we have seen, that amounts to no explanation at all.

The proper explanation refers, rather, to the goal toward which the behavioral pattern is directed (e.g. delivering the mail in a timely and efficient manner) and a plan of action conceived and executed by an intending agent or group of agents for the sake of

accomplishing that goal. Importantly, it is not necessary to know the exact nature of the goal or the plan in order for such an explanation to be extremely plausible.

Suppose, for example, that you are monitoring, via CIA satellite, movements of vehicles on the ground in some foreign country deemed hostile by the government. Certain distinctive vehicles (large trucks, etc.) are observed moving from one place to another in regular daily, weekly, and monthly patterns. These patterns of movement will be understood teleologically, as manifesting systematic goal-oriented plans of various types (commercial, administrative, military, etc.) without knowing the nature of each goal or plan itself. Indeed, as the analyst, you would be taking it as a given that various plans are being executed, and trying to identify, on the basis of your observations, any that might endanger the interests of your employers.

Again, what are the alternatives to the teleological explanation in this case? They are as we have seen. One is simply to postulate the observed regularity as a sheer coincidence. But if that strikes us as absurd, we can postulate the brute, inexplicable necessity of the same regularity across time and space. And if that does not suit us, we could postulate something that explains the necessity of the observed regularity; namely, a brute, inexplicable, *unobserved* regularity across time and space. Another possibility hitherto unconsidered here is to simply deny the existence of the observed regularity altogether. Any of these conclusions would be sure to get you booted from your post as CIA analyst. That is, of course, unless your superiors had some reason to prefer to believe that the observed patterns do not indicate systematic planning (say, if such an indication were to represent such a dire threat to what they perceive as their fundamental interests that they choose not to face it).

These choices are exactly the same with regard to the regularity of events in nature; namely between an explanation in terms with which we are familiar (everyday, I experience taking a series of coordinated actions, directed toward a goal), and an explanation that is, in fact, no explanation at all. Therefore, if an explanation is needed, the teleological explanation explains. If no explanation is required, then the hypothesis of natural necessity will fit the bill, revealing only the lengths that will be taken in order to avoid a teleological explanation of the regularity in nature.

The teleological explanation suggested here, of course, is a distinctively occasionalist one. The hypothesis that the regularity in nature is explained in terms of a divine plan is compatible with the broadly deist view that this plan consists mainly of a system of natural necessities that are established at one time by God, and that operate independently of His intervention thereafter. But even conceived as initially established by God, the idea of such “necessities,” operating independently of His intervention, still amount to nothing more than brute regularities. If the ‘necessity’ of natural regularities is to be explained by God’s maintenance, then they are not, in themselves, necessary after all. Rather, they are contingent and dependent on His constant maintenance. But the maintenance of a pattern of events is the placement of each event in the relations that constitute the pattern. Thus, as Ghazali contends, the events come about through the power of God – the intention by which they come to be “according to a determinate plan of will and knowledge and in conformity with both.”

The occasionalist explanation of the uniformity of nature escapes both horns of the dilemma imposed by the hypothesis of natural necessity. It avoids the absurdity of asserting the uniformity as a brute fact, by appealing to an explanation in terms with

which we are intimately familiar – the intentional execution of goal-oriented plans – that we undertake ourselves on a regular basis, and with which we unhesitatingly understand regularity in the behavior of others. It also avoids infinite regress (like that of regularities asserted to explain the necessity of regularities). Here, the only further questions called to mind are: 1) what is the plan that is manifest in the order of nature, and 2) why this plan? If occasionalism is true, then these are extremely important questions. However, unlike the case of natural necessity, where the lack of an explanation of it leaves us with no idea of what it could mean about nature over and above the regularity itself, it is not necessary to know what the plan is and why it is being executed in order to understand that a pattern of behavior manifests the execution of a plan, and what it means for such a pattern to be so explained. We saw this in the case of the CIA satellite-analyst, where behavioral patterns would be understood as manifesting the execution of a plan, though the specific nature of the plan is itself precisely what is under investigation.

CHAPTER THREE: AL-GHAZALI'S DEFENSE OF OCCASIONALISM

3.1 Ghazali's epistemological premise

The theory of divine concurrence, as we saw, does not constitute a plausible alternative to occasionalism for adherents to the doctrine divine conservation. Thus, Ghazali and his Mutazalite opponents, addressed in the *Iqtisad* are correct in their shared view that the doctrine of the pervasiveness of divine power, as expressed by Ghazali, runs afoul of what they refer to as the doctrine of generation – the view that temporal events give rise to one another by necessity. Ghazali couches the anticipated Mutazalite objection in the following terms:

Someone may say: How do you claim the pervasiveness of the connection of [God's] power with all temporal occurrences when most of what there is in the world by way of motions and other things are generated [things], one generated from another by necessity? For the movement of the hand, for example, by necessity generates the movement of the ring [on the finger] and the movement of the hand in the water generates the movement of the water; and this is experienced.”¹⁵⁸

Ghazali's first response is to call into question this use of the term 'generation'. He offers an analysis of the idea of natural 'generation' that is devoid of any causal content.

What for us is known by the expression, “generation,” is for a body to emerge from the interior of [another] body in the way the newly born emerges from the mother's belly and [the way] plants [emerge] from the earth.¹⁵⁹

It is impossible, argues Ghazali, that such a thing could be observed between the motions of the hand and those of the ring or the water, because motion has no 'interior' from which another motion could 'emerge'.

¹⁵⁸ Al-Ghazali, *Iqtisad* 95 (311)

¹⁵⁹ Ibid 96 (312)

Hence, if the motion of the ring was not latent in the motion of the hand, what would its being generated by it mean? This needs explanation. And if this is not understood your statement that this is observed is ignorance and folly, since it is [only] its occurrence *with* it that is observable, nothing else. As for its being generated by it, [this] is not observable.¹⁶⁰

All this suggests an underlying argument of something like the following structure: All that is observed of the relations between natural temporal events are non-causal relations; therefore, all that is known by expressions connoting relations between natural temporal events are non-causal relations. The implicit premise, then, must be that what is known by expressions connoting relations between temporal events is limited to what is observed of those relations.

That is, after the manner of a strict empiricist, Ghazali seems to be operating from the premise that what is “known by the expression” in this case, is limited to the empirical contents of our experience. However, he does not conclude, like Hume, that we are in possession of no meaningful concept of real causation whatsoever - just that we have no meaningful concept of real causation between inanimate things. This becomes clear in his response to the insistence he anticipates that ‘generation’ is being used to express a genuine causal relation.

Rather we mean by it the existence of an existent after another existent and its being existent and originated by it. That which is originated we call generated and that through which origination takes place we call that which generates. This meaning is understood. What proves its falsity?¹⁶¹

“If you confess that,” he writes, “then what proves its falsity is that which proves the falsity of the created power being that which brings about [the] existence [of the object of power].”¹⁶² The reason that the proof of falsity in each case is identical, is that

¹⁶⁰ Ibid

¹⁶¹ Ibid 98 (313)

¹⁶² Ibid

the operative concept in each case is, at bottom, identical. That concept just is that of a thing's being originated by a *power*; again, an *intention by which a thing comes into existence according to a determinate plan of will and knowledge, and in conformity with both of them*. "If, then, we deem it impossible to say that an object of power occurs through a created power," he writes, "how would we not deem impossible an occurrence through that which is not a power?"¹⁶³

The argument here that no object of power can occur through something that is not a power is based on the premise that no such thing is "known by the expression." What can be "known by the expression" is limited to what is observable. Ghazali's claim is that among inanimate objects, all that is observable is concomitance, not generation in the sense of a real coming to be of one *by* another. If, then, by generation you mean a thing's coming to be by something else, you must just mean that thing's coming to be by a power. The implication, then, is that what is known by the expression 'y comes to be by x' is, in every case, that x is the intention of an agent by which y comes about (in which case, of course, y is an act). That is, all that is observed of real causation is in the relation between the intention of the agent and the intended act. Thus, to claim that an inanimate object brought about an event is to conceive it as a power, in which case, as Ghazali says, please refer to the proof that no created power brings about an object of power.

Besides the epistemological premise, there are two main operative propositions in this line of reasoning. The first is that causation is never observed between inanimate objects. The second is that causation is (at least sometimes) experienced between the intention and the intended act. Together, these premises entail that causation is only

¹⁶³ Ibid

understood as causation by intention. This points toward the reasoning behind Ghazali's peculiar definition of power. However, all the argument we have received from him so far is the simple claim that causation is never observed between inanimate objects. What we need is more to back up this claim, as well as some argument that we do, in fact experience causation by intention, and that power is, indeed, just the sort of causative intention that Ghazali takes it to be.

But wait. There is something else here that calls for an explanation. As Ghazali alluded to in a previously cited passage, nothing occurs through any created power. What, then, is the meaning of the created power's being called a 'power' at all? And how, in light of this claim, is it to be maintained that we experience causation by intention, since, as we are created, nothing presumably comes about by way of our 'powers'? We will wait to tackle this gem in the last chapter, on Ghazali's theory of 'acquisition'.

In the next section, we will review a more involved argument on his part to the conclusion that inanimate things have no active or passive causal powers, and show why this raises a further question with regard to the metaphysics of nature in general. In the section after, we will review Ghazali's argument that we do, in fact, experience causation by intention, support that argument with one from John Locke, and develop the idea into an argument in support of Ghazali's conception of power and, ultimately, the prototype of an independent argument for occasionalism on the basis of the metaphysics of causation.

3.2 Ghazali on causation and the inanimate

The seventeenth discussion in *Tahafut-ul-Falasifah*, on causality and miracles, opens with another statement of the occasionalist doctrine.

“The connection between what is habitually believed to be a cause and what is habitually believed to be an effect is not necessary,” Ghazali writes. On the contrary, in “all [that is] observable among connected things” between which there is no logical entailment, “it is not a necessity of the existence of the one that the other should exist, and it is not a necessity of the nonexistence of the one that the other should not exist... Their connection is due to the prior decree of God, who creates them side by side, not to its being necessary in itself, incapable of separation.”¹⁶⁴

In this passage, there are three central issues. The first is a denial of natural necessity. Secondly, there is a clear affirmation of ‘connections’ between observable things that are ‘habitually believed’ to be causes and effects. Finally, there is the claim that these connections are due to God’s creating the connected things ‘side by side’. We turn first to the denial of natural necessity.

Taking the sequence of events involved in the contact of fire with cotton and its subsequent burning as an example, Ghazali maintains the possibility of the former without the latter, and vice versa. Against this possibility, he opposes the position that, “the agent of the burning is the fire alone, it being an agent by nature [and] not by choice—hence incapable of refraining from [acting according to] what is in its nature after contacting a substratum receptive of it.”¹⁶⁵

¹⁶⁴ Al-Ghazali, *Tahafut* 170

¹⁶⁵ Ibid 171

This position actually involves two distinct claims. One is that the burning action follows necessarily from the nature of the fire “after contacting a substratum receptive of it;” in this case, the cotton. For the action to follow necessarily from the contact, the cotton’s being a “substratum receptive of it” must lie in its nature also being such that it necessarily burns upon contact with fire. That is to say that it is an essential property of cotton to burn when in contact with fire, and that it is an essential property of fire to burn cotton when in contact with it. Thus, the first claim involves the postulation of essential dispositional and active causal properties in material substances by which events in the world follow necessarily from their interaction. The second claim is that the agent of the burning is the fire alone.

Ghazali, of course, rejects both claims, insisting not only that inanimate things do not bring anything about with necessity, but that they do not bring anything about at all. Again, he points out the want of empirical evidence to the contrary.

The one who enacts the burning by creating blackness in the cotton, [causing] separation in its parts, and making it cinder or ashes, is God, either through the mediation of His angels or without mediation. As for fire, which is inanimate, it has no action. For what proof is there that it is the agent? They have no proof other than observing the occurrence of the burning at the [juncture of] contact with the fire. Observation, however, [only] shows the occurrence [of burning] at [the time of the contact with the fire], but does not show the occurrence [of burning] by [the fire] and that there is no other cause for it.¹⁶⁶

Generalizing, observation shows only spatio-temporal proximities between events (e.g. burning of cotton at the time of contact with fire). Ghazali refers to these proximities variously as “occurrence with,” “existence with,” and, as we just saw, the “connections” between observable things “habitually believed” to be cause and effect. Observation does not show causal relations between events. A consequence of this is that

¹⁶⁶ Ibid 171

the causal relation is distinct from the observable connections habitually associated with it. If the causal relation is analytically reducible to some combination of such connections, then Ghazali could not claim that observation does not show it. But not only does observation itself not show any causal relation between observable things, it provides no proof of such a relation, as “existence “with” a thing does not prove that it exists “by” it.”¹⁶⁷

Indeed, we will show this by an example. If a person, blind from birth, who has a film on his eyes and who has never heard from people the difference between night and day, were to have the film cleared from his eyes in daytime, [then] open his eyelids and see colors, [such a person] would believe that the agent [causing] the apprehension of the forms of the colors in his eyes is the opening of his sight and that, as long as his sight is sound, [his eyes] opened, the film removed, and the individual in front of him having color, it follows necessarily that he would see, it being incomprehensible that he would not see. When, however, the sun sets and the atmosphere becomes dark, he would then know that it is sunlight that is the cause for the imprinting of the colors in his sight.¹⁶⁸

Here, the seeing of colors occurs with the opening of the sight, but not by it. More precisely, the latter is not the agent. Ghazali, speaking the Aristotelian language of the philosophers he is addressing, is using the term ‘agent’ in the sense of ‘active cause’. What the example shows is that the opening of the sight is the removal of an impediment to the eye’s passive disposition to receive the ‘imprinting’ of the colors, not an independently active cause that necessitates the seeing of colors. This does not show that the opening of the sight does not causally contribute at all to the seeing of colors. In fact, it seems to imply that it does. But at this stage, Ghazali is not taking aim simply at the claim that substances causally contribute to the occurrences of events. Again, he is

¹⁶⁷ Ibid

¹⁶⁸ Ibid 171-172

discussing the claim that substances are active causes that, when ‘connected’ with apparent effects, alone necessitate those effects.

3.3 *Necessity, the Will, and the metaphysics of nature*

In the example, the observation of the occurrence of seeing colors at the time of the opening of sight is shown not to prove that the latter is an active cause that, alone, makes the former necessary. As it turns out, the sun is the agent. But interestingly, that is also a mistake. For according to Ghazali’s position, the sun is no more an agent than the eye. So the example is actually one of a man coming to the realization that an initial belief was mistaken, only to replace it with another mistaken belief! Indeed, the observation of the sun setting “with” the cessation of seeing colors no more proves that the sun was the agent “by” which the colors were seen than the replacement of film on the eyes “with” such cessation would prove that its removal was the agent. This apparent mistake on Ghazali’s part is in fact the technique he uses to make his point.

Whence can the opponent safeguard himself against there being among the principles of existence grounds and causes from which these [observable] events emanate when a contact between them takes place – [admitting] that [these principles], however, are permanent, never ceasing to exist; that they are not moving bodies that would set; that were they either to cease to exist or set, we would apprehend the dissociation [between the temporal events] and would understand that there is a cause beyond what we observe?¹⁶⁹

Just as the blind man in the example was led by the realization of the falsehood of his initial belief into a new false belief, Ghazali uses the example itself to lead the reader from the refutation of the position that individual substances are agents that necessitate effects to the consideration of a new position. In every case where there appear to be

¹⁶⁹ Ibid 172

events connected in such a way that one necessarily follows from another, or from the properties of a substance involved therein, there are conditions under which the latter will not follow from the former. Thus what were thought to be active causal properties of the substance or event that necessitate the “effect” turn out to be operative only under certain conditions. They are thus not active causal principles, but dispositions subject to external conditions of actualization. These conditions can only be provided by an active cause. There must, then, be some independently active cause. This is a line of reasoning that resonates with the adherents of the next position to which Ghazali takes aim.

The second position belongs to those who admit that these temporal events emanate from the principles of temporal events, but that the preparation for the reception of the forms comes about through these present, observed causes – except that these principles are also [such that] things proceed from them necessarily and by nature, not by way of deliberation and choice, in the way [light] proceeds from the sun, receptacles differing in their reception because of the differences [of] disposition...the principle is one but...the effects differ because of the differences of the disposition in the receptacle.¹⁷⁰

In other words, there is a single active first cause that operates as the agent in all events, providing the conditions under which events occur according to the dispositions of various substances that are, in themselves, purely passive. Many of Ghazali’s contemporaries, claiming coherence with Islamic orthodoxy, identified this first cause with God. However, their view that the fact that events occur as they do is a necessary consequence of a homogenous action of the first cause on the various dispositions of substances sharply contradicts that orthodoxy. “Based on this notion,” writes Ghazali, “they denied the falling of Abraham in the fire without the burning taking place, the fire remaining fire, and claimed that this is only possible by taking the heat out of the fire –

¹⁷⁰ Ibid 172-173

which makes it no longer fire – or changing the essence of the body of Abraham into stone or something over which fire has no effect.”¹⁷¹

Having arrived at a single active cause, the point of controversy is the idea that events occur by it in the way they do with necessity, in virtue of the dispositions of substances being as they are. This is a consequence of the postulation that God’s action is homogenous and that substances are characterized in their natures by essential dispositional properties. “We do not concede,” writes Ghazali, “that the principles do not act by choice and that God does not act voluntarily.”

What does Ghazali mean by denying that the principles (of dispositions) do not act by choice? Certainly, he is denying that dispositions of created substances bring about their effects of necessity. But is he claiming that created material substances themselves passively contribute to the course of events by choice? Besides the fact that little sense can be made of the idea of a passive contribution by choice, such a claim would completely dissolve the distinction between the inanimate and the animate that Ghazali has been clear so far on maintaining.

It is most likely, then, that the statement is to be interpreted in such a way that the denial that the ‘principles’ do not act by choice and the denial that God does not act voluntarily are equivalent. The ‘principles’ of dispositions are simply patterns in God’s voluntary action. Indeed, from the premises that God is the single active cause, and that He acts voluntarily, it can be shown to follow that created things do not have specific intrinsic dispositions or passive causal powers, and thus contribute nothing, causally, to the course of events. This will be explained after reviewing Ghazali’s argument for the premise that God acts voluntarily.

¹⁷¹ Ibid 173

Ghazali addresses this issue in the first discussion of the *Tahafut*, during the course of a lengthy set of arguments regarding the temporal creation of the world. In regard to this, the ‘philosophers’ argued that, as one moment in time is identical to every other in relation to the world’s origination, all the conditions of its existence were present throughout eternity. Since there is nothing to explain the world’s being created at one time rather than another, it must have existed from eternity, being emanated from God by necessity. Ghazali answers by reference to will. “The world came to existence when it did, having the description with which it came to exist, through will,” he writes, “will being an attribute whose function is to differentiate a thing from its similar.”¹⁷²

In response to the argument that such a faculty is inconceivable, Ghazali poses the following thought experiment:

For we will suppose that there are two equal dates in front of someone gazing longingly at them, unable, however, to take both together. He will inevitably take one of them through an attribute whose function is to render a thing specific, [differentiating it] from its like. All the specifying things you have mentioned by way of goodness, proximity, and ease of taking, we can suppose to be absent, the possibility of taking [one of the two] yet remaining. You are hence left between two alternatives. You could either say that equality in relation to the individual’s purpose is utterly inconceivable, which is sheer foolishness, the supposition [of this equality] being possible; or else, that if the equality is supposed, the man yearning [for the dates] would ever remain undecided, looking at them but taking neither through pure will and choice that [according to you] are dissociated from the objective [of taking a specific one].¹⁷³

The position of claiming that in such a situation a person would actually be unable to reach out and select one of the identical dates is intuitively absurd. “It is hence inescapable, for anyone engaged in theoretical reflection on the true nature of the voluntary act, whether in the realm of the observable or the unseen, but to affirm the

¹⁷² Ibid 22

¹⁷³ Ibid 24

existence of an attribute whose function is to render one thing specifically distinct from its similar.” If such an attribute should be affirmed for human beings, as the thought experiment makes persuasive, then it would be quite strange to claim the inability of God to choose between identical options. In this context, the argument is that there is no impossibility in God’s choosing to create the world at one moment, rather than another, in time. Our purpose, however, is to see how all this leads to the denial of even passive causal contributions on the part of created things. Let us start with the idea of voluntary action.

We do not want to say that voluntary action is only possible between identical options. Rather, voluntary action is only possible for a being with the capacity to make a choice between identical options, regardless of whether the options before them are, at any given time, identical with regard to the objective. But as a consequence, voluntary action is only possible for a being with more than a single option. Thus, the adherents of the second position, conceiving God’s action as homogenous, render him rather like a cosmic generator, involuntarily and continuously zapping things into being just what they are disposed to be. The fact that God can act voluntarily, then, entails that his action is not homogenous.

If God is a single, homogenous, active causal principle, then the operation of that principle in relation to some substance with a disposition *D*, constitutes in every case a single homogenous condition *C*, of the activation of *D*. Then, all behaviors *B*, of all the substances, result from the activation of their dispositions to behave in just that way, under condition *C*. Thus, inasmuch as anything happens at all, what happens follows necessarily from the natures of substances. Under the hypothesis that God’s action is

homogenous, that action could only be described as, simply, the activation of the dispositions of things – making actual. But since God's action is voluntary, it is not homogenous, and thus not limited to the application of a single condition in relation to the dispositions of things.

Suppose God has two qualitatively distinct actions He can apply to substances. Then, if a substance's disposition is to play a role in determining its behavior, each qualitatively distinct possible action of God's must constitute a qualitatively distinct condition of activation of the substance's potential. This potential must, then, involve two dispositions: one disposition to behave in such and such a way under condition 1, and another to behave in such and such a way under condition 2.

If we allow qualitative distinction between God's actions, then His action cannot be described as simply that of activating the disposition of a substance. Nor can we distinguish them by simply indexing them to the various dispositions of substances (i.e. we cannot say that God has two actions: 1) to activate disposition 1 in x, and 2) to activate disposition 2 in x). The descriptions of the dispositions of the substance are themselves indexed to the actions [i.e. 1) 'to behave in way B1 under condition 1'; and 2) 'to behave in way B2 under condition 2']. What descriptive content, then, could be attached to the two actions in virtue of which they could be rendered qualitatively distinct? All that can be said is that, to 'activate disposition 1' is to 'make x behave in way B1'; and to 'activate disposition 2' is to 'make x behave in way B2.' The dispositions of the substance, then, will be: 1) to behave in way B1 under the condition that God makes it behave in way B1, and 2) to behave in way B2 under the condition that God makes it behave in way B2.

God is omnipotent, and so not limited to two qualitatively distinct actions. As Ghazali says, God is capable of everything that is logically possible. Consequently, the dispositions of substances really all reduce to the single disposition to behave in all and only those ways in which God makes them behave. That is, they contribute nothing to the course of events other than their absolute submission to the will of God. It also follows from this that substances are not differentiated by specifically distinct dispositional properties, as they possess none. Thus, their natures cannot be characterized by distinctive behavioral regularities they exhibit under various conditions. This has implications for the metaphysics of nature, as we will see.

3.4 Ghazali's Lockean epistemology of power

In the same section of the *Iqtisad* in which Ghazali argues that it is impossible for anything to come to be by a created power, he also opposes determinism:

Thus the determinists (*al-mujbra*) have adopted the view denying the power of [God's] servants. From this, as a necessary consequence for them, follows the denial of the necessary differentiation between the spasmodic movement and the voluntary movement.¹⁷⁴

In the *Tahafut*, Ghazali responds to a similar charge against himself that if God could, as his view implies, move the hand of a dead man to bring about from it ordered writing, there would be no difference between the tremor and the voluntary movement.

We apprehend this in ourselves. For we have perceived in ourselves a necessary distinction between the two states and have given expression to this difference by the term "power." We thus know that what takes place in the two possible alternatives [is two things], one of them [occurring] in one state, the other in [another] state – namely, the bringing to existence of a motion with the power over it in the one state, and the bringing of motion into existence without the power over it in the other state.¹⁷⁵

¹⁷⁴ Al-Ghazali, *Iqtisad* 87 (303)

¹⁷⁵ Al-Ghazali, *Tahafut* 180

Since his ultimate thesis entails that all motions are brought into existence by God, the power referred to in the description of these states is not the divine power. The apprehension is introspective. The power that distinguishes the experiences is that of the subject's. That is, in the case of voluntary movement, one experiences motion brought into existence by one's own intention, according to one's will and knowledge. In the case of the tremor, the argument would be, one simply experiences the occurrence of the motion, not its occurrence by anything. The experience of this difference is what underwrites our understanding of "power." Ghazali's argument here is in the same vein as that associated with John Locke.

In his *Essay concerning Human Understanding*, Locke expressed three evidently true insights with which we will begin the present discussion. Understanding by the terms "active" and "passive" powers, "able to make" and "able to receive" change, respectively, the first of these claims is that the sensible objects of our experience exhibit passive power. "In most of them," he writes, "we cannot avoid observing their sensible Qualities, nay their very Substances to be in a continual flux: And therefore with reason we look on them as liable still to the same Change."¹⁷⁶ Simply, we experience change in sensible objects, and it follows that they are capable of being changed.

The second claim is that we can only understand a change as having proceeded from an active power. "Nor have we of *active Power* (which is the more proper signification of the word *Power*) fewer instances. Since whatever Change is observed, the Mind must collect a Power somewhere, able to make that change, as well as possibility in the thing it self to receive it."¹⁷⁷ Changes in sensible objects imply the

¹⁷⁶ Locke (1689) II, XXI, 4

¹⁷⁷ Ibid

existence of an active power from which they proceed. This, of course, is a much more controversial claim than the last, and will thus be a central issue in what is to come. The standard Humean objection is that, on the contrary, there is no strictly logical contradiction in the idea of a change without an active cause. In other words, the existence of an active cause does not follow analytically from the occurrence of a change.

But this is not entailed by Locke's statement that, upon experiencing a change, 'the mind must collect a power somewhere, able to make that change'. A more accurate interpretation of the statement, and one that more honestly reflects experience, is that the principle of sufficient reason, which is what is at issue here, is an ineliminable fixture of our understanding of objective changes, regardless of whether philosophical justification for it is possible within the limitations of Humean epistemology (e.g., the presumption that the a priori is limited to the analytic).

A hypothetical scenario I owe to Alexander von Schoenborn illustrates the point well. Imagine that while driving your car, it suddenly stalls and fails to start again. You have it towed to the shop only to be told by the mechanic that your car will not work again and that, furthermore, there is absolutely no reason for it. It is safe to say that even the most radical empiricist will not be satisfied with this diagnosis (or non-diagnosis, as it were); one would undoubtedly respond, that, on the contrary, there must be *some* reason. The mechanic has simply not discovered the cause of the trouble, or is not even looking for it. Suffice it to say that one will not be satisfied merely to have the mechanic point out that, in fact, there is no *logical contradiction* in the car giving out without there being some cause of its failure. This is because changes are simply not understood as uncaused, regardless of the lack of analyticity between the ideas. The former fact should

be at least as philosophically interesting as the latter in evaluating the philosophical justification of the principle of sufficient reason. For our purposes, however, we need not ask the Humean to regard it as philosophically justified. We need only to establish that, indeed, one can and will only really understand a change as having proceeded from an active power.

The third claim is that changes in sensible objects do not provide a positive idea of active power. On the presumption that there are just two sorts of Action – thinking and motion – Locke writes, “1. Of Thinking, Body affords us no *Idea* at all, it is only from Reflection that we have that: 2. Neither have we from Body any *Idea* of the beginning of Motion. A Body at rest affords us no *Idea* of any *active Power* to move; and when it is set in motion it self, that Motion is rather a Passion, than an Action in it.”¹⁷⁸ Changes we observe in sensible objects are effects, not active causes. To take Locke’s example, the motion of a billiard ball on being struck is not an action of the ball, but rather an effect on it (“bare passion”). And when the ball in motion strikes another ball, it does not really act on the other, but only “communicates the motion it had received from the other;” it transfers the effect, but does not produce it.¹⁷⁹ Observation of changes in sensible objects, then, even in contiguous sequences, does not provide a positive idea of active power. “For it is but a very obscure *Idea* of *Power*, which reaches not the Production of the Action, but the Continuation of the Passion.”¹⁸⁰

Locke, famously, locates the source of our positive idea of active power as follows:

¹⁷⁸ Ibid

¹⁷⁹ Ibid

¹⁸⁰ Ibid

The *Idea* of the beginning of motion, we have only from reflection on what passes in our selves, where we find by Experience, that barely by willing it, barely by a thought of the Mind, we can move the parts of our Bodies, which were before at rest.¹⁸¹

By ‘beginning of motion’, Locke means the origination of it – the power from which it proceeds. The positive idea of this power is derived directly from this inner experience.

This at least I think evident, That we find in our selves a *Power* to begin or forebear, continue or end several actions of our minds, and motions of our Bodies, barely by a thought or preference of the mind ordering, or as it were commanding the doing or not doing such or such a particular action.¹⁸²

Later, Locke assigns the term ‘volition’ to the ‘beginning’, ‘forebearing’, ‘continuing’, and ‘ending’, etc., of the “actions of our minds and motions of our bodies,” the power thereof being “will.”

Volition, ‘tis plain, is an Act of the Mind knowingly exerting that Dominion it takes it self to have over any part of the Man, by employing it in, or withholding it from any particular Action. And what is the *Will*, but the Faculty to do this? And is that Faculty anything more in effect, than a Power, the power of the Mind to determine its thought, to the producing, continuing, or stopping any Action, as far as it depends on us?¹⁸³

It is perhaps the strength or the weakness of this view that it depends, argumentatively, on the appeal to introspection. Since the phenomena involved are internal, there is no independent method of establishing the precise meanings of terms like “will” and “volition.” Thus, Locke writes, “whosoever desires to understand what it is, will better find it by reflecting on his own mind, and observing what it does, when it *wills*, than by any variety of articulate sounds whatsoever.”¹⁸⁴ In this sense, and in what is

¹⁸¹ Ibid II, XXI, 4

¹⁸² Ibid II, XXI, 5

¹⁸³ Ibid II, XXI, 15

¹⁸⁴ Ibid II, XXI, 30

to be established by it, Locke's appeal here is of a kind with Ghazali's appeal to the distinction between the voluntary and spasmodic bodily movements. In either case, the strength of the argument depends on whether we find, in our experience, what they describe. Perhaps, at least, we can be helped in looking more closely by taking into consideration an objection to this view, notably leveled by Hume.

In the appendix to his *Treatise on Human Nature*, Hume describes the Lockean position as follows:

Some have asserted, that we feel an energy, or power, in our own mind, and that having in this manner acquir'd the idea of power, we transfer the quality to matter, where we are not able immediately to discover it. The motions of our body (say they) obey the will; nor do we seek any further to acquire a just notion of force or power.¹⁸⁵

Hume's objections are simple and straightforward. In the case of the motions of our bodies, Hume contends, "the will being here consider'd as a cause, has no more a discoverable connexion with its effects, than any material cause has with its proper effect."¹⁸⁶ In the case of the mind's obedience to the will, "The effect is there distinguishable and separable from the cause, and cou'd not be foreseen without the experience of their constant conjunction."¹⁸⁷ In the first case, it is just asserted that there is no 'discoverable connexion', which in itself would leave the question as to what would constitute a 'discoverable connexion'. It is the second statement that provides the answer. Lack of a discoverable connexion is explained by the fact that the effect is, 1) "distinguishable and separable from the cause", and 2) "could not be foreseen without the experience of their constant conjunction." Earlier, we had discussed Hume's idea of power as a property of an object that makes necessary some effect, a role Hume

¹⁸⁵ Hume (1739-40) 632

¹⁸⁶ Ibid

¹⁸⁷ Ibid

understands as rendering the absence of the effect a logical contradiction. This conception of power, we saw, was determined by his effort to locate philosophical justification for induction. Such an idea of power fits exactly his comments here. Hume finds, upon introspection, that his willing to move his body or to direct his thought in such and such a way is conceptually distinct from the bodily motion and thought itself. Thus, the one does not logically entail the other. Consequently, the only basis for predicting that in the future, my body and / or mind will obey my will is the past experience of their constant conjunction. Nothing in the introspection establishes a necessary connection between them.

This, however, is simply a non-sequitor. The objection misses Locke's point precisely because of the presumption that an adequate idea of power must play the epistemological role of providing what Hume would consider philosophical justification for induction. Illustrating this requires an appeal to introspection on the part of the reader. First, raise your arm. Now, ask yourself, did you experience exercising the power to raise your arm? Now, lower your arm. Ask yourself, are you able, on the basis of what you just experienced, to guarantee with deductive certainty that you will be able to raise your arm again? Of course not: there are a number of conceivable possibilities of your not being able to exercise the same power at some point in the future. You may suffer a paralysis or a debilitating illness. In this case, it may be that your arm does not respond to your will. The obedience of your body to your will is, of course, not necessary. If you suffer a paralysis, you will not thereby suffer a logical contradiction. However, this has nothing to do with the question whether or not, in what you just did, you experienced exercising a power over your arm. Locke's point is not that, in our

experience of voluntary action, we come by some powerful idea guaranteeing that future willings will necessarily produce corresponding actions. It is just that, in that action, at that time, we experienced exercising a power. The fact that there is a difference between a power and a necessity is tacitly affirmed by Hume's own statement that, "We have command over our mind to a certain degree, but beyond *that* lose all empire over it..."¹⁸⁸ That we experience some 'command' (read 'power') over our minds and bodies is all that is needed to vindicate Locke; it matters not that such power is limited.

As simple a mistake as this is, it has been inherited. Jonathon Bennett makes the same mistake, which causes him to interpret Locke as arguing that, "We do infer a patterned future from a patterned past; this inference is invalid unless there are powers which secured the past patterns and guarantee future ones; so there are such powers."¹⁸⁹ The fact that his misinterpretation of what Locke observes in the experience of volition is a result of the same Humean presumption of what 'power' must be is verified by his question, following shortly thereafter: "Do we experience within ourselves any exercise of "power," any kind of non-inductive basis for saying how we shall act?"¹⁹⁰ Again, it is not a non-inductive basis for saying how we will act that Locke asks us to notice in our experience of volition. Rather, it is the fact that we did act, and that in doing so we experienced exercising a power - a power to act as we did, not to predict the future.

¹⁸⁸ Ibid

¹⁸⁹ Bennett, (1971) 262

¹⁹⁰ Ibid

CHAPTER FOUR: POWER AND MATTER

4.1 Occasionalism and the metaphysics of nature

Earlier, we mentioned that the apparent consequent of occasionalism, that natural substances do not have distinct intrinsic dispositions, imposes conditions on any compatible metaphysics of nature. We are going to discuss this in more detail here. Aristotelian oriented metaphysics has sought to account for permanence amidst change by postulating some kind of substratum (variously construed) in which properties inhere and which remains as properties are exchanged, thus constituting the existing *thing* that changes. This allows us to distinguish between object, property, and event. Jaegwon Kim's formulation of an event as the acquisition of a property by an object at a time is just a precise articulation of this old idea. Effects are most commonly thought of as events because it is the observed changes in properties that call for causal explanation. The change in properties is the effect. The object that acquired and/or lost a property is the *thing affected*. That a distinction can be drawn between effect and thing affected on this general model is central to its being able to account for some stable permanence 'under' the change.

An object's being affected in the way that it is involves its having a particular potential that, in virtue of something about the object, is activated under conditions provided by an active cause. Another way to say this is that the object has, in virtue of its intrinsic properties, a disposition to behave in a certain way under certain conditions. Indeed, the object's being a particular kind of thing can, on this model, be thought of as its having a certain set of potentials or dispositions. This collection of properties is said to constitute the object's nature.

Consider an object's having a disposition d to behave in a certain way under certain conditions, but where its having d is itself conditional on something c , extrinsic to it. In this case, d itself will not be a part of the object's intrinsic nature, but a property it bears in relation to c . On the broadly Aristotelian model, the object's having disposition d under conditions c will be explained by its disposition d_1 to have d under conditions c . Likewise, if d_1 turns out to be a property the object has only in virtue of some further external conditions c_1 , then the object must have some d_2 to have d_1 under c_1 . Explanation would continue in this way through a probably very complex web of inter-related conditions, but ultimately arriving at some set of dispositions that the object has in virtue of its own intrinsic properties, independently of anything external to it.

In this way, the explanations of what happens in the world irreducibly involve the intrinsic nature of things – dispositions they have internal to themselves to behave in the way they do. Postulation of intrinsic natures substantiates the distinction between effect and thing affected, change and thing changed.

The tension that arises with occasionalism consists in the fact that the occasionalist thesis seems to throw into doubt this distinction. Under occasionalism, the object itself is an effect of God, not only in its initial creation and its continual preservation in existence, but also (following from the fact that a thing cannot be without being something) in its being what it is. But what a thing is consists in some set of properties it has.

We spoke of intrinsic natures as properties a thing has independently and that explain its being disposed to behave in the way it does under various conditions. Now, the occasionalist cannot accept that intrinsic properties of things cause them to behave in

the ways that they do. In fact, it seems that the occasionalist cannot admit any intrinsic properties in the sense of properties had by a thing independently of any condition external to it. In every case, it is God alone who is the condition. Furthermore, there cannot be any contribution on the part of the object itself – no potency or disposition to respond to the condition – because such a potency would constitute a property that it has, again, not independently, but only on the condition of its having been bestowed by God.

The upshot is that occasionalism seems to suggest a metaphysics of nature in which there are no intrinsic natures. Thus, Freddoso argues that the occasionalist is forced to what he calls the “no nature” theory, and wonders what sort of ontology of corporeal things is possible under such a view.¹⁹¹ Whether this is true, and whether, if so, it allows for a plausible metaphysics of nature, and what kind, are all questions of interest for the occasionalist. We do not hope to answer them completely here. We do intend, however, to follow up on a possibility in that regard, by returning to Strawson’s hypothesis that ‘objective forces’ are constitutive of the nature of matter. We will show that it ultimately leads to a theory of matter that may be compatible with occasionalism, but is quite different from what we can presume Strawson had in mind.

4.2 Objective forces and the nature of matter

Strawson’s thesis is that the intrinsic nature of matter is that in virtue of which events in the world are regular in the way they are. We have also seen that he characterizes matter’s having an intrinsic nature as its having “fundamental unchanging properties.” Much of his account of causation involves the inclusion of ‘objective forces’ among those properties. Here, we will examine what it means to include ‘objective

¹⁹¹ Freddoso, (1988) 115

forces' as constitutive of the nature of matter. Then, we will look at a reason to believe that matter should be conceived in this way. Ultimately, however, we will find that the consequence is the reverse of Strawson's hypothesis. Causal powers are not possessed in virtue of the nature of matter. Rather, matter is itself an effect of the exercise of causal powers.

Let us first examine the notion of regularity between events in the world, taking as our starting point Kim's formulation of an event as the acquisition of a property by an object at a time $[x, P, t]$. The regularity of events in the world consists in the patterns of relations between them. To take a simple hypothetical case in point, we can say that the sequence of events $[x, P, t1]$, $[y, R, t2]$ exemplifies a regularity just in case, *ceteris paribus*, events of the second type follow (or have followed) events of the first type. Events are types in virtue of universals – the properties acquired as well as, possibly, other properties determining the types of objects involved in events. While the latter may contribute to the background conditions, let us follow Kim in saying that the appropriate regularity in this case consists in P 's being an *INUS* property of R . On this model, then, if Strawson's thesis is true, then P and R must both be reducible to the fundamental properties constitutive of the intrinsic nature of matter. What does it mean for a property to be a part of the intrinsic nature of matter? The first step in answering this question is to ask what it means for a property to be intrinsic to matter, given that matter is not an individual object.

Peter Menzies has recently brought attention to an implicit relativity involved in the concept of intrinsicity.¹⁹² In short, things (properties, relations, etc.) that are

¹⁹² Menzies, (2000) 8

intrinsic are always intrinsic *to* something, and may not be intrinsic *simpliciter*. Menzies discusses the concept of intrinsicity relative to a system.

A property F is *intrinsic to a system of kind K* if and only if, possibly, a member of the set of objects constituting a system of kind K has F although no contingent object wholly distinct from the set exists.¹⁹³

By a system of a kind, Menzies means, “a set of constituent objects configured in specific ways.”¹⁹⁴ There are astronomical systems, biological systems, economic systems, and countless others, different from one another on the basis of the constituent objects, properties, and relations. Systems, of course, are identified by abstraction. A property may be intrinsic to a system, though not intrinsic to any individual member of the system. Likewise, a property intrinsic to an individual member of one system need not be intrinsic to any individual constituent of the system that comprises that member.

For example, the intrinsic properties of a planetary system would include the mass and shape of the individual astronomical bodies. But the intrinsic properties of the system need not all be intrinsic properties *simpliciter*. For example, the property of being gravitationally attracted to another member of the planetary system is an intrinsic property of the system, though it is not an intrinsic property *simpliciter*.¹⁹⁵

Perhaps the set of material objects and the relations between them can be thought of as constituting a system of materiality. Working with Menzies’ analysis, then, to say that a property is intrinsic to matter will be to say that it is possible that a material object possess the property even if no immaterial objects exist. Such a property, then, could be relational with regard to any individual object possessing it; in which case, the object could not possess it in the absence of any other material object. However, as long as it is

¹⁹³ Ibid 9

¹⁹⁴ Ibid 8

¹⁹⁵ Ibid 9

possible for a material object to possess the property in the absence of any immaterial object, it would be an intrinsic property of matter, though not of any individual object.

Secondly, what does it mean for a property to be part of the nature of matter? Normally the nature of an object is understood to consist of some essential property, or set of properties, where an essential property of an object is one without which the object would not exist. But again, matter is not an object. Perhaps we can apply a definition of essential here, modified in a manner similar to Menzie's modification of 'intrinsic'. Where, again, the system of materiality consists of the set of all material objects, we might define 'essential to a system' in the following way:

A property P is essential to a system S iff: necessarily, for any object x , if x is a member of S , then x has P .

As in the case of 'intrinsic', this leaves open the question whether a property essential to S is also essential to every object in S . This would depend on whether membership in S is essential to the objects therein (e.g. whether materiality is essential to every material object).

In summation, then, perhaps a property P is part of the intrinsic nature of matter iff:

- 1) For any object x , such that x possess P , x would possess P even if no immaterial object exists, and
- 2) Necessarily, for any object x , if x does not possess P , then x is not a material object.

What, then, should we understand by 'forces'? We have noted Strawson's statement that 'objective forces' are just, "that in virtue of which the existence of any de

re physical necessities consist.” However, it is clear that he has in mind something more determinate than simply the role he takes them to play in that regard. Notice that, in characterizing the “separatist” picture, he sets forces against the conception of “objects possessed of certain intrinsic properties, yet in themselves inert and static.” Is the distinct characteristic of forces, then, that they are, in themselves, essentially active and dynamic? From his statement that, “matter and the forces that partly constitute its nature do not come apart like this,” should we understand that matter is, in itself, essentially active and dynamic?

The Oxford English Dictionary offers several definitions of ‘force’ derivative on the general notion of strength or power. Here are three relevant samples of its common use.

- 1) “As an attribute of physical action or movement: Strength, impetus, violence, or intensity of effect.”
- 2) “Physical strength or power exerted upon an object.”
- 3) “Peculiar power resident in a thing to produce special effects; virtue, efficacy.”

The first makes force an attribute of an action, the second identifies it straightforwardly as power in action, while the third also identifies it with power, but also in a state of potentiality. The Oxford Dictionary also offers the following theoretical definitions used in the physical sciences.

- 4) “An influence (measurable with regard to its intensity and determinable with regard to its direction) operating on a body so as to produce an alteration or tendency to alteration of its state of rest or of uniform

motion in a straight line; the intensity of such an influence as a measurable quantity.”

- 5) “The cause of any one of the classes of physical phenomena, e.g. of motion, heat, electricity, etc., conceived as consisting in principle or power inherent in, or coexisting with, matter; such principles or powers regarded generically.”

The same three elements noted above occur in these definitions. The first part of 4) makes force an active exertion, while the second characterizes it as an attribute of that action. The definition in 5) identifies force directly as causal power inherent in matter. The metaphysical debate about this notion, of course, is whether it refers to a class of objectively existing phenomena that are the causes of the behavior of matter, or merely functions as a measure of change in motion, where the latter is the only real physical change. Strawson is clearly committed to some form of realism about forces, given the explanatory role he assigns them; they are indeed, “objective forces.” On this view, forces are the causes of the behavior of matter, built into matter itself, not attributes of the behavior.

Thus, on Newton’s second law of motion, for example, where $\text{force} = \text{mass} \times \text{acceleration}$, Strawson’s view would entail an asymmetrical relation between force, on the one hand, and mass and acceleration on the other. If the force increases while the mass remains constant, it causes the acceleration to increase; but it cannot be the case that an increase in acceleration produces an increase in force. Rather, the increase in acceleration must be conceived as merely indicating an increase in force, it manifesting an effect of force, and not the reverse.

Another question is whether force is to be conceived here as a sort of latent potential that, at any given time, may be either activated or “left off,” or whether force just is its exertion, so to speak. The role that Strawson wants to assign for it suggests the latter answer. If forces are to be taken as latent potentials, the question is left open as to why it is exerted when it is, and what ensures that it is exerted at times and in ways that manifest the phenomena, including the regularity, the alleged necessity of which it is to explain. If forces just are their exertions, then it could possibly be argued that, since the constant behaviors they constitute are essential to matter, the regularity we observe in nature follows necessarily from its existence. But the problem is that the existence of matter itself, and thus the active forces that are to be taken as part of its nature, is not necessary. So, as before, this fails to underwrite any necessity in the regularity we observe. It does, however, avoid the extra trouble waiting in the alternative; that is, the need to explain why and how a latent potential in matter to behave is activated when and where it is. It also resonates with Strawson’s implication that forces are the opposite of “inert and static” - presumably, active and dynamic.

But Strawson rightly questions whether a realist conception of matter in the former terms is even coherent. “In fact, however, this is seriously questionable, given an ordinary understanding of external-world realism according to which it involves belief in the existence of space occupying objects.”¹⁹⁶ This remark is correct, and hearkens to a historical argument notably advanced by Kant, and recently treated by Rae Langton.

4.3 The nature of matter and the occupation of space

¹⁹⁶ Ibid 257

Langton's Kantian argument is rooted in a debate over whether solidity or impenetrability is the fundamental property of matter. Locke had argued that the materiality of material objects requires more than just the geometric properties that the Cartesians took as primary. It requires a space-filling feature. This feature, for Locke, was solidity, an intrinsic property (understood here as intrinsic simpliciter). Impenetrability, a 'power to resist the approach of other bodies', was classified as a merely tertiary quality grounded on solidity. Kant, on the other hand, asserted that a power to resist the approach of other bodies – 'relative impenetrability' - is what is required for a space-filling feature, replacing solidity, or 'absolute impenetrability' as the primary quality in virtue of which matter is material.¹⁹⁷

Langton's reading of the Kantian reductio argument for this banishment (in which 'impenetrability' is taken to mean *relative* impenetrability) can be reconstructed as follows¹⁹⁸:

- 1) If solidity is a fundamental property of matter, then its connection to impenetrability is either necessary or contingent.
- 2) If the connection is necessary, then solidity just is impenetrability, and is therefore not an intrinsic property.
- 3) If the connection is contingent, then it is possible that a solid thing not be impenetrable.
- 4) If it is possible that a solid thing not be impenetrable, then solidity is inscrutable.

¹⁹⁷ Langton, (1999) 165-166

¹⁹⁸ Langton, (1999) 174-175

- 5) If the connection between solidity and impenetrability is contingent, then solidity is inscrutable (3,4).
- 6) ∴ If solidity is postulated as a fundamental property of matter, distinct from impenetrability, it is inscrutable.

The force of this argument comes with premise 3), that if solidity is only contingently connected with impenetrability, then it is possible for solid things to be penetrable. How does this seemingly innocent consequent constitute a reductio against the idea that solidity is an intrinsic property, distinct from and contingently connected to impenetrability?

It is important that a solid object's being impenetrable not be confused with its being invincibly durable. Impenetrability is 'a power to resist the approach of other bodies,' not a guarantee of victory. For an object to lack impenetrability, then, is for it to lack any power of resistance altogether. When Langton writes, "it is possible for there to be a world in which human beings – just like us in intrinsic respects – can walk through solid walls," she does not mean that we could break through them, sending debris flying.¹⁹⁹ Such an event would actually verify the impenetrability of the wall's matter. She means that there would be no resistance whatsoever. If the connection between solidity and impenetrability were contingent, it would be possible for all 'solid' objects to 'occupy' the same space simultaneously. Then what, exactly, *is* 'solidity'?

Solidity becomes *inscrutable*. We know what impenetrability is, but we do not know what solidity is – except that it is the supposed 'ground' of impenetrability. Solidity becomes the name for a something–we–know–not–what – ominously similar to a Kantian thing in itself.²⁰⁰

¹⁹⁹ Ibid 175

²⁰⁰ Ibid 176

Apart from impenetrability, the notion of ‘solidity’ is empirically vacuous. To occupy a space is to repel other objects from that space; and solidity, if it is anything, is just this repulsive force. But it is essential to matter that it occupies space. Therefore, repulsive force is essential to matter. It meets the condition we had set out earlier for a property’s being a part of the nature of matter:

Necessarily, for any object, x, if x does not repel other objects from also entering a space, then x is not a material object.

Let us also, tentatively, consider it as meeting the condition of being intrinsic to matter:

For any object x, such that x repels other objects from a space, x would repel other objects from the space even if no immaterial objects exist.

Note that, if this is true, repulsive force is intrinsic to matter, but not necessarily intrinsic to the material object. If repulsive force is extrinsic to the material object, then matter is extrinsic to the material object, since repulsive force is essential to matter. All this turns on how repulsive force is understood. Just before, we mentioned the question of whether the forces in question are to be understood as just being their exertions (i.e., as essentially active), or as latent potentialities waiting to be activated or exerted. On a standard understanding of ‘intrinsic’, a property is intrinsic to an object just in case the object’s bearing the property is compatible with ‘loneliness’ (i.e., the object would bear the property even if no other object existed). On this definition, repulsive force, conceived as a latent potential to repel approaching objects, is intrinsic to its bearer; it could have the property even if no other objects existed (being merely such that, *if* an object were to approach, it would repel it). On the other hand, conceived as essentially

active – as simply ‘repulsion in action’ – it would not be intrinsic to the object.

Repulsion is always repulsion *of* or *against* something else. If nothing else exists, there can be no repulsion.

Consider the notion of repulsive force as a latent potential to repel - an instance of a ‘peculiar power resident in a thing to produce special effects’. Initially, we can only understand an object’s having such a property as its being such that, *if* another object were to approach, it would repel it. Are we then, to understand this potential to repel as being *activated* by the approach of another object? But if the occupation of space just *is* the repulsion of other objects from it, then no space is occupied until the force is in action. Then it cannot be another object’s *approach* that activates the repulsive force, because that which does not yet occupy space cannot approach or be approached. Consequently, there *is* no repulsive force, conceived even as a potential, because it is impossible that an object that does not occupy space repel another object from a space it occupies.

On the other hand, it might be argued that the object occupies space simply in virtue of it’s having the potential to repel approaching objects. This raises the question as to what that potential might consist in. The simple fact, alone, that the object would repel another approaching object cannot explain what the object’s occupation of space (not simply its location therein) *means* in a world in which no other objects exist. But we just saw, in the case of the only intuitive candidate for such a property – namely, ‘solidity’ – that apart from the action of which it is the supposed intrinsic ‘ground’, it is empirically vacuous. Certainly the argument can show the same for any *unintuitive* candidate we might imagine.

The only notion of repulsive force, of which inclusion as a constituent in the nature of matter could provide content to the idea of a material object's occupation of space, is that of an essentially active force. In this case, there is no escaping the conclusion that a material object's matter is not entirely intrinsic to it. An object cannot properly occupy space – and, thus, no material object can exist - in a world in which no other objects exist. This is a central feature of the dynamic theory of matter of which Kant was a proponent, and something like such a theory is a consequent of hypothesizing active forces as constitutive of the intrinsic nature of matter. Of course, repulsion alone cannot be the single force constitutive of the nature of matter. Kant adds that of attraction. Here, Langton sums up his theory, in which substances (the 'objects' that have materiality in the preceding) are monads:

Monads are unextended centers of fields of force. The force field is divisible, but the monads themselves are not. The physical world cannot arise from the mere existence of substances, but only from their forces, of which there are two, attraction and repulsion. A substance determines its space 'by the field (*ambitus*) of its activity, whereby it hinders things on both sides of it from any further mutual approach' (Prop. VI). This force of impenetrability is finite at any distance from the monad, but infinite at the center, following an inverse cube law. Both forces are needed for the constitution of matter, and attraction is Newtonian gravitation, following an inverse square law. As a result of the differing laws governing the two forces, there is in effect a physical corpuscle whose 'surface' is the set of points at which the effect of one force is cancelled out by the effect of the other.²⁰¹

On this theory, material nature is to be understood as the interaction of two basic types of forces. While the specific details are, no doubt, dated, the general idea of this particular theory – that the phenomena of 'inert' matter is in fact a result of the inter-relation between the actions of various forces – can be found, in some form or another, in current theoretical physics. At least in the case of macroscopic material objects, physical

²⁰¹ Ibid 99

theory is unanimous that they have a microphysical structure consisting of various sorts of moving particles arranged in certain spatio-temporal relations that are maintained by different sorts of forces (attraction, bonding, charge, etc.). That is to say, the story physics has to tell about the structure of material objects centrally involves forces.

The metaphysical question that led us to this point was whether matter can be conceived as having a stable intrinsic nature without conceiving objective forces of some kind as essential to that nature. We saw that the idea of an object's occupying space – essential to the idea of it's being a material object – requires just that. The next question, that led us to the consideration of a dynamic theory of matter like the Kantian theory described briefly above by Langton, was whether the forces thus required by the nature of matter can also be understood as intrinsic to individual material objects. We found that in the case of repulsive force, it could not. The same line of reasoning will show this is also the case with attractive force. If these are the basic forces that constitute matter, or if there are others, irreducible to these, that are also not intrinsic features of individual objects, then the conclusion to be drawn is that, even in the case of the microphysical, active forces are the basic elements, and matter is, hence, thoroughly dynamic and relational. The alternative is that, at bottom, there is some ultimately intrinsic material particle. In this case, however, the question is simply whether such a particle occupies space. If not, then in what sense is it material; and if so, then what does its occupation of space consist in if not the repulsion of approaching objects? Langton's Kantian argument, then, is just revisited.

However, it is not necessary for our purposes to resolve this question conclusively. Even if there is a basic material particle, the structural integrity of the

material world depends on the maintenance of relations between them that constitute that structure. In this case, it is still necessary to postulate active forces maintaining the structure of the material world, or else concede that its very continuity is a sheer coincidence, as Strawson pointed out. Nor, in what follows, need we commit ourselves to the implication, mentioned earlier, that all properties involved in causal sequences are reducible to properties of matter. This followed on the contention that the regularity of the world is due ultimately to the nature of matter. What we have found is, rather, the reverse. The nature of ‘matter’ is ultimately due to the regular action of various forces. As we concluded earlier, nothing in that amounts to an explanation of the regularity observed in nature. Neither need we commit ourselves to the view that all forces are reducible to attraction and repulsion, or to any other particular array of basic forces. The line of reasoning we are about to embark on will, rather, broaden the scope of possibilities in that regard.

4.4 *From the epistemology of power to an occasionalist account of causation*

In our discussion of Locke, we noted his statement that what we observe of the interaction of sensible objects is never the production of the effect, but merely the transfer or communication of it. In light of the preceding, this should be reexamined. Having posited active forces as constituents of the nature of matter in order to underwrite the integrity and stability of matter (including a material object’s ability to occupy space, which we have identified with a power to repel approaching objects), we shall, for hypothetical purposes, take the two forces postulated as basic by Kant – attraction and repulsion – as ‘case studies’, so to speak. Locke’s ‘communication of motion’ is surely a manifestation of the latter. Such communication (e.g. from one ball to another) is not

possible between objects that do not occupy space (i.e., that do not repel approaching objects). So, while the phenomena, understood as communication of motion, does not provide a positive idea of the production of motion, or a positive idea of any active power, it does imply (in the sense of it being such that the ‘mind must collect a power’) some active power; not only, however, in the production of the original motion, but also in the occupation of space required of both objects. It is not just *any* ball to which the motion of the first is ‘communicated’, but the one that occupies the space approached by the first. And this shows that, in the case of repulsion, the passive power to be repelled from a space implies the active power to repel from the space. (A holographic ball located in the path of the moving ball will not be moved by it; its lack of ability to repel from a space implies its lack of ability to be repelled. It does not occupy the space at which it is located.)

Still, it is only the case that ‘the mind must collect a power somewhere’ in the face of such a phenomenon. What is observed therein is the effect alone, not the active power the existence of which is indicated by it. In the case of repulsion, we observe objects moving in opposite directions, the motions of objects change as they approach one another, motion begin in an object upon being approached by another, etc. All these are the effects of repulsive forces, and are not the active powers themselves. Likewise with attraction, what we observe in phenomena understood as instances of attraction is the motion of objects toward each other in such a way as to indicate an active power pulling them together, pulling one to another, or holding together constituent parts and, hence, maintaining the integrity of a material object. According to the theory of matter we were led to in considering active forces as constituents of the nature of matter, the

corporeality of material objects is, at bottom, the effect of the interaction of attractive and repulsive forces. In this case, matter is itself an effect that indicates active power.

In discussing the question of whether the will has freedom, Locke, observing that both are powers, writes, “For who is it that sees not, that *Powers* belong only to *Agents*, and *are Attributes only of Substances, and not of Powers* themselves?”²⁰² It would follow from this general rule, along with what has been postulated of matter, that matter itself does not have causal powers, being as it is, the effect of such powers; the phenomena of matter itself is neither substance (in Locke’s sense) nor agent. As Locke maintains, nothing observed in the changes in objects provides a positive idea of active power, but only indicates the existence of an active power. Thus, it indicates an agent, but does not itself provide a positive account of the nature of the agent. Regarding the latter, we can either simply posit an agent, of which we have no positive concept whatsoever, or ask whether our positive idea of active power that not might serve as a clue to the nature of the agent of such a power.

Also, in our discussion of Locke, we had noticed that Jonathon Bennett makes the same mistaken objection to Locke that Hume had. Bennett, however, raises a separate objection that Hume did not. It is specifically directed at the claim that the idea of power as an attribute of external objects is provided by analogy from our introspective experience of volition.

But the supposed transfer is unintelligible. Locke could not say: ‘The statement that *the fire made the water boil* is exactly analogous to the statement *I made my arm go up* (by deliberately raising it)’; for that would imply that the fire knowingly and deliberately boiled the water. He must

²⁰² Ibid II, XXI, 16

say, then, that ‘The fire made the water boil’ is *partly* analogous to ‘I made my arm go up’: in the former statement, ‘made’ has a sense which involves more than mere alteration, which is directly cashable only in respect to one’s own deliberate doings, but which can also be applied in the absence of deliberateness and even of sentience.²⁰³

Thus, the objection goes, active powers in nature cannot be completely understood on the basis of our experience of volition, as the latter essentially involves, as Ghazali would say, “will and knowledge,” and to evacuate such content from the idea leaves us without the idea of active power that we had from experience. Bennett writes, “Compare that with: ‘Trees have pains, in a sense of “pain” which does not involve the having of conscious states though it can be grasped only by those who have pains and are conscious of them.’ If one is better than the other, Locke does not show how.”²⁰⁴

Bennett’s objection here is correct, but the conclusion that follows is rather the opposite of what we can safely take him to expect. It is just this. Given that, with the experience of changes in nature, “the Mind must collect a Power somewhere, able to make that Change,” along with the fact that the positive idea of power we do have cannot be intelligibly evacuated of the intentional content with which it is provided in experience, it follows that the changes we experience in objects can only be understood as effects of will. That is, whereas Locke asked of will, “is that Faculty anything more, in effect, than a Power,” Bennett’s objection would actually lead to the converse of that definition; which is, in essence, Ghazali’s: “Power is equivalent to the intention by which a thing comes into existence according to a determinate plan of will and knowledge and in conformity with both.”

²⁰³ Ibid 261

²⁰⁴ Ibid

Nietzsche, of all people, followed a similar line of reasoning. He also contended that the only positive empirical content we have for the concept of causation (and thus our only real understanding of it) is derived by analogy to our ‘inner’ experience of intention, or will. Regarding our epistemological access to causation ‘in the objects’, he expressed his agreement with Hume.

We have no “sense for the *causa efficiens*”: here Hume was right; habit (but not only that of the individual!) makes us expect that a certain often observed occurrence will follow another: nothing more!²⁰⁵

But, where Hume concluded that the idea of ‘power, or of a connexion betwixt them (objects)...arises from the repetition of their union,’²⁰⁶ Nietzsche disagreed. The first step in Nietzsche’s genetic account of the idea of natural causation is our interpretation of events in the world as ‘events caused by intentions.’ “That which gives the extraordinary firmness to our belief in causality,” he writes, “is not the great habit of seeing one occurrence following another but our inability to interpret events otherwise than as events caused by intentions.”²⁰⁷ Nietzsche offers as an example our understanding of the same two basic forces we found central to Kant’s dynamic theory of matter: “attraction” and “repulsion.”

“Attraction” and “repulsion” in a purely mechanistic sense are complete fictions: a word. We cannot think of an attraction divorced from an *intention*. – The will to take possession of a thing or to defend oneself against it and repel it – that, we “understand”: that would be an interpretation of which we could make use.²⁰⁸

²⁰⁵ Nietzsche, WP 550

²⁰⁶ Hume, (1739-40) 166

²⁰⁷ Nietzsche, WP 550

²⁰⁸ Ibid 618, 664

Here, Nietzsche postulates that the conceptual ingredient that differentiates, for example, the idea of two objects moving in opposite directions from the idea of two objects *repelling* each other is, in the latter, the concept of the motion as an intentional action directed toward the goal of creating distance between the agent and an object. According to Nietzsche, “causation is created only by thinking compulsion into the process,” and since compulsion is nowhere to be located among our impressions of the external world, “one is obliged to understand all motion, all “appearances,” all “laws,” only as symptoms of an inner event and to employ man as an analogy to this end.”²⁰⁹ In this way, events are made “more familiar” – a process that Nietzsche equates with “comprehension.”²¹⁰ Interestingly, Nietzsche views this conception of comprehension in contrast to the results of natural science, which he claims, “...resolves the familiar more and more into the unfamiliar,” though its goal is the reverse.²¹¹ The concept of repulsion, discussed earlier, serves as a relevant example in support of such a notion. In this case it could be said that natural science attempts to replace the concept we are more familiar with – the experience of acting with the intention of pushing something away – for one which, Nietzsche claims, we cannot comprehend at all. Nietzsche criticizes the “mechanistic interpretation of the world” as being unable, in its effort to explain natural processes by purely intention-free accounts, to explain force itself, which he calls a ‘victorious’ concept.²¹² He claims that the ‘mechanistic’ concept of causation, conceived apart from intention, is empty, and thus, incapable of explaining events. Causation by will, on the other hand, is intimately familiar.

²⁰⁹ Ibid

²¹⁰ Ibid

²¹¹ Ibid 608

²¹² Ibid 618, 619

From here, Nietzsche takes matters a step further. In Section 36 of *Beyond Good and Evil*, he offers one of his earliest arguments to the effect that all efficient force is ‘will to power’. The first part of the argument runs as follows.

Suppose nothing else were “given” as real except our world of desires and passions, and we could not get down, or up, to any other “reality” besides the reality of our drives...is it not permitted to make the experiment and ask the question whether this “given” would not be *sufficient* for also understanding on the basis of this kind of thing the so-called mechanistic (or “material”) world? I mean, not as deception, as “mere appearance,” an “idea” (in the sense of Berkeley or Schopenhauer) but as holding the same rank of reality as our affect...²¹³

Deciphering this passage raises, first, the question of what Nietzsche means by supposing that ‘our world of desires and passions’ is all that is ‘“given” as real’. A clue is that Nietzsche takes, as a consequence of this supposition, the ‘permission’ to hypothesize that we can sufficiently understand the ‘mechanistic (or “material”) world’ on the basis of the *kind* of thing that ‘our world of desires and passions’ represents. The first thing we can do in understanding this hypothesis is to replace the phrase ‘our world of desires and passions’ with ‘our intentional experience of will and volition’. The former phrase could be taken too narrowly, in a way that makes Nietzsche’s thought experiment less intelligible and arguably reflects his less philosophical motivations. It will soon become clear why the latter makes for a better articulation of what I take Nietzsche to be suggesting.

The material world, according to the hypothesis, is to be *understood on the basis of* ‘this kind of thing’. Let us presume the general Aristotelian view that to understand something is to know its cause or causes; that is, to know the answer to the question ‘why’ regarding that thing. In this case, then, to understand the ‘so-called mechanistic

²¹³ Nietzsche, BGE 47

(or “material”) world’ on the basis of the *kind* of thing represented in our intentional experience of will and volition is to explain events in the material world as effects of will and volition. This, of course, requires that the latter already be understood on its own terms. Otherwise, nothing is really understood on its basis at all. Thus, it must be ‘given’.

By ‘*kind of thing*’ we mean to emphasize that material events are not to be explained merely as phenomenal effects of our own will and volition; ‘not as “mere appearance”...but as holding the same rank of reality as our affect.’ Therefore, our intentional experience of will and volition being ‘“given” as real’ does not mean that it is the only thing that is real, or the most real. By ‘rank of reality’, Nietzsche means something like a role in an explanatory scheme. The material world, in this suggestion, is not to be understood as ontologically dependent on our minds or wills (as it would be in the kind of subjective idealism of Berkeley or Schopenhauer), but rather, in terms of a kind with our experience of volition and will that are as ontologically and explanatorily basic.

Nietzsche’s suggestion can be rearticulated as follows. Suppose nothing is experienced as being explanatorily and causally basic other than our own intentional exertions of will and volition. In that case, we should consider the hypothesis that will and volition could serve adequately as the causally explanatory basis of the material world. Nietzsche then moves on to consider what he takes to be the implication of such a hypothesis. But here, he fails to draw fully its logical conclusion. The material world, he suggests, would hereby be understood:

...as a more primitive form of the world of affects in which everything still lies contained in a powerful unity before it undergoes ramifications

and developments in the organic process (and, as is only fair, also becomes tenderer and weaker) – as a kind of instinctive life in which all organic functions are still synthetically intertwined along with self-regulation, assimilation, nourishment, excretion, and metabolism – as a *pre-form* of life.²¹⁴

Here, Nietzsche has effectively accomplished exactly what he credits the ‘mechanistic’ concept of causation with: resolving the familiar into the unfamiliar. From the will and volition of our direct experience, he moves to understanding the material world on the basis of a ‘more primitive form’ of the same – a *pre-form* of life’ that is not at all as intelligible as that with which we started. Bennett’s objection to Locke applies here as well. If we are to test the hypothesized explanatory basis, we cannot equivocate on the nature of what is being tested. The ‘permission’ for the hypothesis was based on the ‘givenness’ of the explanatory basis in question – will and volition as disclosed directly in experience. If we exchange what is thus given for what is not, we lose the permission. Therefore, for Nietzsche to start talking about a “more primitive form” of that given that we do not understand, in order to introduce a strange sort of quasi-Darwinian / Freudian / pan-psychic (or *sub-psychic*) metaphysic (this turns into his doctrine of “Will to Power”), forfeits the philosophical permission he started with. This is especially unfortunate because, aside from this diversion, Nietzsche’s argument for, not only the ‘permission’, but also the obligation of the hypothesis, is actually compelling.

In the end, not only is it permitted to make this experiment; the conscience of method demands it. Not to assume several kinds of causality until the experiment of making do with just one has been pushed to its utmost limit (to the point of nonsense, if I may say so) – that is a moral of method which one may not shirk today – it follows “from its definition” as a mathematician would say.²¹⁵

²¹⁴ Ibid 46-47

²¹⁵ Ibid 47

The general rule of method that Nietzsche prescribes for us offers clues to a deeper understanding of the thought experiment he invites us to engage in. The rule is that we should not assume several kinds of causality until the experiment of making do with just one has been exhausted. That Nietzsche believes such a rule would apply in this case implies that he considers making do with just one kind of causality as equivalent to understanding the natural world on the basis of our drives. Thus, by the “given” reality of the will, he refers to its efficacy, understood in connection with intention, as in the concept of “attraction” discussed above. It is on this basis that we are to understand all efficacy.

The question in the end is whether we really recognize the will as *efficient*, whether we really believe in the causality of the will: if we do – and at bottom our faith in this is nothing less than our faith in causality itself – then we have to make the experiment of positing the causality of the will hypothetically as the only one.²¹⁶

This passage allows us to more clearly elucidate the steps in Nietzsche’s reasoning. The first is the general principle that Nietzsche ascribes to the “conscience of method”:

- 1) Do not assume several kinds of causality until the experiment of making do with just one has been exhausted.

Another important premise can be derived from Nietzsche’s aside in the above passage:

- 2) Our belief in causality of the will is nothing less than our belief in causality itself.

This claim is based on the view, discussed above, that causation of the will is the only basis for understanding causation at all. Thus, our belief in the latter just is our

²¹⁶ Ibid

belief in the former. From the fact that it is the only comprehensible concept of causation available, combined with Nietzsche's rule of method, the following conditional follows:

- 3) If we believe in the causality of the will, then we have to make the experiment of positing it as the only kind of causality.

The alternative would be to understand the natural world on the basis of a causality that is incomprehensible, which is not to understand it at all. But again, this means that the concept of causality by which we understand natural events must maintain the intelligibility with which it is given in experience. We cannot sneak in a theorized kind of primordial, will-like principle that we don't really understand to take its place. What is given in experience, of the origination of events, is *volition* – 'an act of the mind knowingly exerting that dominion it takes it self to have over any part of the man, by employing it in, or withholding it from any particular action.' Causation need not be conceived as our own volition (we are already characterizing it as common). Nor need it be the exertion of 'dominion' by a human mind over a human body. The essential part of the concept corresponding to this experience that is necessary for underwriting an understanding of causation, by analogy, as causation outside of one's own volition, is simply the 'knowing exertion of dominion'. *Will*, again, is the power to make such an exertion. Thus, on the resulting hypothesis, "power is equivalent to the intention by which a thing comes into existence according to a determinate plan of will and knowledge, and in conformity with both." The material world, then, would be understood as effects of just that.

4.5 *The ‘Will to Power’ vs. the Will of God*

Earlier, we had acknowledged that matter, at bottom, is an effect that indicated active power. In the course of that discussion, we made the observation that, at least in the case of repulsion, the passive power to be repelled from a space implies the active power to repel from the space. This is a consequence of the postulation that the solidity of matter *is* its power to repel approaching objects. From this it follows that, in any case of repulsion, what is acted on by the active force is nothing other than another, opposing force, or more precisely, that array of forces the exertion of which is associated with an object’s occupation of space. But now that we are to understand causal power as intentional, we are no longer limited, in our conception of powers, to those simple ‘pushing and pulling’ forces associated with materiality. We must, however, acknowledge with Nietzsche, something like the following strange consequence.

“Will,” of course, can only affect “will” – and not “matter” (not “nerves,” for example). In short, one has to risk the hypothesis whether will does not affect will wherever “effects” are recognized – and whether all mechanical occurrences are not, insofar as a force is active in them, will force, effects of will.²¹⁷

In other words, if causality of the will is the only kind of causality, then all effects are effects of will *on* effects of will. As strange as this seems, instances of such a thing are common in experience. An action as simple as gripping a pencil is just that – the exertion of opposing forces, between the thumb and fingers, to produce an effect that is just the effect of the one force on the other in relation to the pencil. What we experience is the exertion of power through the fingers and thumb in the manner described. But on the current hypothesis, the very corporeality of the appendages in question, as well as the pencil; their occupation of space, without which this phenomena would not be possible, is

²¹⁷ Ibid

itself the effect of active forces understood here as exertions of will. We do not experience maintaining our own corporeality through a continuous exertion of will, nor do we experience maintaining the corporeality of any other object (such as the pencil). Therefore, we are not to understand matter as the effect of an exertion of our own will, but as the effect of an exertion of some will, understood by analogy to our own. Then what will or wills is that? Nietzsche pulls the argument toward his doctrine of will to power.

Suppose, finally, we succeeded in explaining our entire instinctive life as the development of *one* basic form of the will – namely, of the will to power, as *my* proposition has it... then one would have gained the right to determine all efficient force univocally as – *will to power*. The world viewed from inside, the world defined and determined according to its “intelligible character” – it would be “will to power” and nothing else.²¹⁸

This is not the place to enter into a detailed exposition of ‘will to power’. All that is needed for our purpose is contained in this passage. The understanding of the world according to its ‘intelligible character’, as Nietzsche puts it, has been the primary leverage in the line of reasoning leading to the understanding of causation as intentional. The reasoning in this passage, however, rests on the supposition of having explained ‘our entire instinctive life as the development of one basic form of the will.’ The implications of this inference are that: 1) all the varieties of volition we experience are reducible to the basic form, and 2) all of our volitions are instinctive.

In the case of the latter, it is precisely the experience in question (recall Ghazali’s reference to the experienced difference between the voluntary movement and the spasm) that shows a distinction between the exertion of will and instinct. In the case of the former, experience shows the basic form of volition as something like ‘knowing

²¹⁸ Ibid

exertion'. That is, it is just this that, if predicated of something other than ourselves, we will understand that thing to exhibit volition, and of a kind that we experience in ourselves. 'Will to Power', on the other hand, is described as something more like an instinctive exertion for the sake of power; the unconscious motive that Nietzsche, in typical nineteenth century fashion, takes to explain all of human history and activity. The essence of such theories (as in the case of Freud) is to postulate hidden, unconscious motives behind our volitions in place of those that we understand ourselves as motivated by. It is precisely to 'resolve the familiar more and more into the unfamiliar'. We, on the other hand, aim to keep things intelligible.

The following propositions, I maintain, are thoroughly intelligible, in the sense in which we have been testing intelligibility; that is, they are drawn from common experience. The first is that the volitions we experience ourselves making are of a variety of types, and under a variety of motives. The other propositions deal with how we commonly understand the volitions of others. We commonly understand the motives of others on the basis of our own motives, or what our motives would be in circumstances similar to those in which we observe the other to be in. We often misunderstand, or fail to understand other's motives on the same basis particularly in cases in which the other is quite different, or in different circumstances from those with which we have experience. Children, for example, often cannot understand why adults behave in the way they do. In such instances, we might understand the motives of another by way of their communicating their motives to us. But often, deliberately or not, motives are misrepresented. Often, this fact is revealed because the stated or supposed motive does not fit the pattern of behavior to which it was supposed to be connected. Patterns in the

volitions of other, indicated by patterns in behavior, in relation to repeated or predictable results of that behavior, might betray a motivation otherwise hidden. This is because patterns in behavior are indicative of the execution of goal-directed plans.

Earlier, we observed that events in the natural world exhibit a strikingly regular pattern. Furthermore, we saw that this is not ultimately explicable in terms of ‘natural necessity’. Rather, postulating the latter still amounts to maintaining regularity as a brute fact. On the other hand, regularity in events is commonly satisfactorily explained as manifesting the execution of a goal-oriented plan in the case of the behavioral patterns of intending agents. Now, with the completion of the argument that, since causation is only really understood as intentional and all the natural events are understood as caused, then all events are only really understood as intended events; we can conclude that all events are best explained as manifesting a goal-oriented plan on the part of an intending agent.

We had articulated Ghazali’s occasionalist thesis as:

Necessarily, for all events e and times t , if (i) anything causes e at t , and if (i) no created thing is a free cause of e at t , then e occurs at t iff: God causes e at t , by intending e at t , and knows e at t .

The preceding discussion, I think, can effectively serve as something of a prototype argument, from what we might take to be Ghazali’s epistemology of power, to our occasionalist account of causation, to just this thesis. Along with this come the apparent metaphysical implications, troubling perhaps, about the nature of matter and corporeal objects. I don’t really expect all this to answer more questions than it actually raises. However, I take that to be a sign of success in, at least, having presented the

embryo of an idea about how the occasionalist thesis might be equipped with a compatible metaphysics of nature.

Of course, the issues raised are varied and tangled. Most obviously, much more needs to be said about the apparent “no nature” metaphysical implications of occasionalism. What more precisely, are they? Are they really unavoidable for occasionalism? If not, are they plausible? Secondly, a more complete treatment of reductionist accounts of causation is called for; in the present work, nothing has been said specifically of the probabilistic and process accounts of, for example. Third, there is a lot room left here for a more refined and specific version of the positive epistemological and metaphysical account of causation suggested here. Perhaps a perusal through the current findings in action theory could turn up something interesting and useful toward that end. Fourth, nothing at all has been offered here in the way of an occasionalist account of secondary causation, even though we discussed the need for it. And last, there is the issue of causation by free agents, which actually brings us to the question raised earlier about Ghazali’s statement that the object of power does not come to be by a ‘created power’.

CHAPTER FIVE: POWER AND THE SERVANT

5.1 Acquisition

Ghazali discusses the issue of ‘created powers’ at length in the *Iqtisad*. Ghazali enters the topic by anticipating the question of whether divine power is connected to “[the enactables] by the powers of animals and the rest of the living among created beings”.²¹⁹ If no, then the pervasiveness of divine power is denied. If yes, then one faces the further dilemma of affirming “an object of power [enacted by] two possessors of power” or denying power to animate creatures altogether.²²⁰

The view of the determinists (*al-mujbra*), of denying power to creatures altogether, implies denial of the immediately evident distinction between voluntary and involuntary motion, as well as the impossibility of religious obligation. The Mutazilite view, of “claiming that all that proceeds from them (i.e. living creatures) is the creation and “invention” (*ikhtira*) of [His] servants,” implies the denial of the pervasiveness of divine power, attributing creation to other than God and to creatures who are ignorant of what they supposedly create. “For [in the case of] motions that proceed from the human being and the rest of animals,” he observes, “if asked about their number, details, and amount, [the individual] would have no information about them.”²²¹ Thus: “The truth is to affirm two powers over one act, and to uphold [the doctrine] of an enactable by power related to two possessors of power.”²²²

Ghazali mounts the following argument:

²¹⁹ Al-Ghazali, *Iqtisad* 86 (302)

²²⁰ Ibid 86-87 (303)

²²¹ Ibid 87-88 (304)

²²² Ibid 90 (305)

- 1) That the voluntary and involuntary movements are necessarily different is self-evident.
- 2) Their difference is only in terms of the creature's power.
- 3) God's power is connected to every possible.
- 4) The voluntary movement (including the creature's power apprehended therein) and the involuntary movement are both possibles.

Therefore, God's power is connected with both movements (including the created power in the former case, which comes to be by God's power).²²³

If, on the contrary, God's power were connected only to the involuntary movement and the creature's power to the voluntary, Ghazali argues, the following would ensue. In case God were to will to stop the movement of his servant's hand while the servant willed to move it, one of the following would have to be true: either, 1) motion and rest will simultaneously occur in the hand, or 2) neither will occur in the hand – either way, a contradiction. Furthermore, it cannot be claimed that in such a case it would simply occur that God's power, being preponderant, would overpower the creature's power. In each case, explains Ghazali, the connection postulated between the power and the movement is that of creation *ex-nihilo* (*al-ikhtira*), which does not admit of variation in degree. There is, thus, no place for the idea of preponderance in this context.²²⁴ Accordingly, the voluntary action is connected to both creaturely and divine power, though it is only the latter by which both the action and the creaturely power connected to it come to be.

From this it comes out that He alone [possesses] invention, that the motion exists and that the one in motion has power over it, and that by reason of

²²³ Ibid

²²⁴ Ibid 91 (307)

his having power over it, his state is different from the state of one suffering from a tremor...

The sum of all this is that the possessor of power, whose power is wide, is capable of inventing power and the object of power together. And since the term, “creator” and “inventor” is applied to one who brings about the existence of a thing through his power, and power and [its] object are both brought through the power of God, exalted be He, He is thus named “creator” and “inventor.” The object of power is not through the power of the servant, though it exists with him. For this reason he is named neither “creator” nor “inventor.” It thus becomes incumbent to seek for this type of relation another different name. Hence the term “acquisition” (*kasb*) was sought for it auspiciously from the book of God, exalted be He.²²⁵

We are now in a position to see that, by describing the experience of voluntary movement in the *Tahafut* as that of “the bringing to existence of a motion with the power over it,” Ghazali did not mean the bringing to existence of a motion by the power. Rather, the motion and the power are both brought to existence by God, the ‘power over it’ consisting in the relation dubbed here as ‘acquisition’.

Ghazali is aware that the immediate question to be raised is over the sense in which this created ‘power’ is to be understood as a power in light of the fact that its object does not come to be by it. He couches the objection as follows. Either the created power is related with the object or not. A power with no relation to an object is impossible. But the only intelligible relation between a power and an object of power is that of causation - the coming to be of the latter by the former. Thus, if the object did not come to be by the created power, then it is not a power at all.²²⁶

Ghazali affirms that the created power is connected to its object, but denies that the only intelligible connection between a power and its object is the causal one. “And if you say that the connection of power is restricted to the coming into existence of the

²²⁵ Ibid 92 (307)

²²⁶ Ibid (308)

[object of power] by [power], this is also false.”²²⁷ The strength of Ghazali’s argument here rests on a premise shared between the Mutazilites and himself that divine power exists eternally, prior to the occurrence of its object. The argument is just that, to make this claim, together with the claim that power is necessarily connected with its object, is just to postulate a connection between power and its object other than a causal one; namely, whatever connection exists in the time before the object is brought about. Thus, the object’s coming to be by the power is not the only intelligible relation between the two.²²⁸

A difficulty here is that, as an Asharite, Ghazali presumably disagrees with the Mutazilite view that created power also exists prior to its object. The establishment of the possibility of *an* intelligible, non-causal connection between divine power and its object prior to the coming to be of the latter does little to support the claim that what would have to be an essentially different non-causal relation exists contemporarily between a created power and its object. In the case of divine power, it remains the case that, *if and when* its object comes to be, it does come to be by it. This, however, is not the case with the created power. Then just what is the nature of this non-causal relation between the created power and its object, in virtue of which it could still be called a power over it?

Ghazali gives voice to this question by considering the objection that “a power through which an object of power does not come to be and impotence are tantamount to the same thing.”²²⁹ Ghazali considers what he says are two possible meanings of this statement. If it means that “the state which the human apprehends when [the created

²²⁷ Ibid 93 (308)

²²⁸ Ibid 93 (308-309)

²²⁹ Ibid 94 (310)

power] exists is similar to what he apprehends when there is impotence in the case of the tremor,” then, Ghazali contends, it is self-evidently false. On the other hand, if, by ‘impotence’ one means simply that the object of power did not come to be by the created power, then it is true, though this use of the term ‘impotence’ is incorrect, “since [power] is an apprehended state whose apprehension in the soul differs from the apprehension of impotence.”²³⁰ But this just suggests a reformulation of the previous question. What, then, does the human apprehend when the created power exists, in virtue of which it is called a power?

I suggest that what Ghazali is alluding to can be approached by considering these two questions separately; that of what the human apprehends when the created power exists, and that of what actually obtains at that time. Since “power is an apprehended state,” power as an apprehended will be simply power: the act coming to be by one’s intention. That is what the human apprehends. As for what actually obtains, we know that what cannot obtain, according to Ghazali, is simply the fact that it is by the intention that the act comes to be. In reality, it comes to be with the intention. What actually obtains, then, is an act coming to be with the intention, along with the apprehension (on the part of the human) that the act came to be by the intention, both act and apprehension coming to be by God’s intention. To intend and to cause are distinct. Thus, the act in reality bears the relation to the intention of being that which was intended, as well as that of being the act of which apprehension of its having come to be by the intention is given by God. This ‘double aspect’ idea resonates with a few of the more mystifying verses of the Qur’an. During the battle of Badr, the Prophet Muhammad (saw) threw a handful of

²³⁰ Ibid 95 (311)

sand at the pagan army and the dust miraculously hit the face of every soldier among them, momentarily halting their advance. Afterwards, the following verse was revealed:

You killed them not, but Allah killed them. And you threw not when you did throw, but Allah threw, that He might test the believers by a fair trial from Him. Verily, Allah is All-Hearer, All-Knower.²³¹

5.2 A brief attempt to ease peripheral worries

The upshot of all this is that we come to an understanding of power via the experience of exercising power, though in reality we do not exercise power. This raises an epistemological, as well as a deeper theological concern.

The epistemological concern is whether the claim that we really have an understanding of power based on the experience of exercising it is not compromised by the fact that we do not, in reality, exercise power. In fact, though, there are a plethora of examples of situations in which one comes to an understanding of a thing via an experience, without coming into contact with the real thing. An art student, for example, can gain an understanding of Van Gogh's impressionism by viewing several good copies of his work, without ever having seen an original piece. A pilot in training can gain an understanding of flying by spending hours in a flight simulator, without ever flying a real airplane. Examples of this sort can be produced ad nauseum. It could be object that, in each case, there is something imperfect in the simulated experience. However, this fact only strengthens Ghazali's case in relation to the theological concern, to which we now turn.

²³¹ Al-Qur'an, Surah Al-Anfal: 17

This theological concern, while removed from the issue of causation per se, is too urgent to leave without some comment. That concern is over the prospect that an apprehension of the exercise of power that has been provided by God actually misleads us as to the pervasiveness of His power, and how creation stands in relation to it. A complete treatment of this set of issues would fill many pages. Herein, I will merely attempt to present a brief suggestion as to how Ghazali might respond to this concern.

Ultimately, I suggest that the experience of exercising power is, however illusory, actually a necessary condition for coming to understand the occasionalist doctrine in light of which it is understood to be illusory, and for coming to understand power as an attribute of God specifically, and the reality of one's relationship to God generally. Since power, as Ghazali contends, is the intention by which a thing comes to be, then to understand what power is, is to understand what it is for a thing to come to be by intention. Intention can only be understood by way of the experience of intending, in each case, one's own intentions. The only way to understand power, then, is by experiencing a thing coming to be by one's own intention. Apart from this, no understanding of will and power, as attributes of God, would be possible. It follows that such an experience is necessary for understanding that God is all-powerful, that His power is pervasive, and indeed, that one's own feeling of power is illusory.

How, then, does one come to realize these things, given that God gives us the experience of exercising power? Hearken back to Ghazali's depiction of the man who, having had the film removed from his eyes, believed that such removal was sufficient for his seeing colors. With the sunset, his illusion of the self-sufficiency of his sight was dispelled. Here, the imperfection of our experience or power plays a similar role.

Ghazali's definition of power is "the intention by which a thing comes into existence according to a determinate plan of will and knowledge and in conformity with both." Like experience, however, is as typified by the experience of deeds that come about by intention, but not as intended, or with unintended consequences, outstripping both our will and knowledge. In these case, we are reminded of our lack of control, and it is just these sorts of experiences that are so commonly mentioned as catalysts of spiritual enlightenment. I suggest, in fact, that the entire course of argument given by Ghazali in the *Tahafut*, from the example of the newly regained sight to the statement that God acts voluntarily, can be read as a paradigm of this sort of realization – a process as spiritual as it is theoretical that is described in several passages of the Qur'an. One vivid example is the following, from Surah Al-Nur:

As for those who disbelieve, their deeds are like a mirage in the desert. The thirsty one thinks it to be water, until he comes up to it, he finds it to be nothing; but he finds Allah with him, Who will pay him his due. And Allah is swift in taking account.²³²

²³² Al-Qu'ran, Surah Al-Nur: 39

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