

# An Argument for a Necessary First Ground

Moniko Monov

*Received June 07, 2025*

*Accepted September 27, 2025*

*Electronic access October 31, 2025*

In this paper, I provide a novel view of how the Cosmological Argument can be combined with the contemporary philosophical relation of metaphysical grounding. This paper, as such, should be interpreted philosophically rather than theologically, and aims to argue that God exists as a first cause from a metaphysical standpoint; it is intended to affirm the conceptions of the philosophical theist, and provoke questioning within the atheistic skeptic. The methodology of this paper is primarily analytical and argumentative, with significant attention attributed to inferences derived from fundamental concepts, comparisons, and evaluations of contemporary metaphysical theories. The essay begins with an overview of the classical Cosmological Argument, the Principle of Sufficient Reason, metaphysical grounding, and possible worlds metaphysics. Then the primary objections to the classical accounts will be addressed and explained. Following this, I conduct a literature review covering the writings of Michael Almeida, Richard Gale, Alexander Pruss, who give their own methods of rectifying such objections through new formulations and concepts with respect to the Cosmological Argument, as well as Kit Fine's and Shamik Dasgupta's views of the grounding relation. Finally, I give my analysis on how grounding can strengthen these cosmological arguments further, and relieve any objections that they might have thereof, in addition to a quick discourse on which regimentation of grounding is most compatible with (and appropriate for) the Cosmological Argument.

## Introduction

Ever since the time of Plato and Aristotle, thinkers have been trying to find a reasonable explanation about the existence of the universe. Is there something that exists beyond what we can see? Is there a first cause for all that exists? While the Cosmological Argument is the most widely accepted contender for the answer to these questions regarding the existence of God, it has faced substantial criticism from skeptics such as David Hume (1748; 1779)<sup>1,2</sup> and Peter van Inwagen (1983)<sup>3</sup>, specifically in regard to why something must have a sufficient reason or first cause at all. These objections range from the epistemic topics of conceivability to the more metaphysical and logical scope of modal collapse or contradiction. Many contemporary theorists, such as Michael Almeida (2018)<sup>4</sup>, Alexander Pruss (1998), and Richard Gale (1998)<sup>5</sup>, have all attempted to revise the main premises and conclusions of the Cosmological Argument. While their novel approaches have assuredly addressed such problems, further problems arise with these improvisations, such as the question of whether God is identical to the world or separate from it - echoing the conclusions made by Spinoza (1677). Considering the contemporary notion of metaphysical grounding, these negative appeals may be mitigated by using grounding as an explanation for things which exist and an assessment of what a Lewisian pluriverse (see Lewis, 1986; Almeida, 2018)<sup>4,6</sup> represents. The aim of this study is to show that metaphysical grounding can be applied to the Cosmological Argument in a way which lends further credence to its truth and responds to its

historical objections.

## Cosmological Argument

The Cosmological Argument is not a rigid singular argument but rather a collection of arguments with varying typologies. These arguments conclude that the universe has a necessary first cause which is separate from the manifest world, conventionally and systematically referred to as "God". This section of the article will primarily cover the more well-known iterations of the Cosmological Argument, particularly in Western and Islamic philosophy.

Definitions of necessity and contingency are integral to the main premises of each cosmological argument. Necessity can be philosophically categorized as logical, modal, and factual (though this is a coarse categorization, such generalizations suffice for our purpose). With respect to being, a logical necessity refers to one that has an impossible non-existence, meaning it logically must exist. An example of this is found in Descartes' God, who (controversially) has existence as part of its essence and definition. Modal necessity, on the other hand, refers to a being that exists in all possible worlds. Numbers, should they exist at all, are an example of something modally necessary, at least to our current epistemic knowledge (however, they are, of course, not sentient beings). Lastly, factual or temporal necessity, which is arguably the most influential to more historical cosmological arguments, refers to something which neither came into existence nor will ever cease to exist - it simply exists of its own

---

accord. Platonic Forms (according to how they are described) fall under this category, as they are perceived to be absolute, unchangeable, timeless, and therefore temporally necessary.

Contingency refers to something (once again we'll concern ourselves with a being) that is neither necessary nor impossible - that is, both its existence and non-existence are possible. For example, all matter in the universe and the universe itself are taken to be contingent by the Cosmological Argument. If all that exists in the manifest world is not contingent, then the (classical) Cosmological Argument breaks down, as there would be no need to explain why particulars exist in the world if they are in fact necessary and exist by their nature. Importantly, contingent beings can neither explain nor cause themselves, otherwise there would be a contradiction to their definitions. For if a contingent particular could explain itself, then it would exist by virtue of its own essence without being determined by the existence of something else, meaning it is both logically, modally, and temporally necessary.

The Cosmological Argument, at least in its classical forms, accepts God as a necessary being in all three aspects, thereby assigning a primary candidate for the first cause of the universe and everything in it. This acceptance may be derived from the Ontological Argument, which necessitates God's existence based on the definitions of necessary beings alone (note that this is one way of arriving at the conclusion, but not the only way). These concepts are foundational to understanding the objections and possible responses to the Cosmological Argument.

The notions and premises commonly used today in the Cosmological Argument contain their origins in the thinking of Aristotle (lived 384-322 BCE), who implicitly suggested the idea of an unmoved-mover or rather an initial cause of all motion. His deductions were expanded upon in Islamic philosophy (see Avicenna; *The Book of Healing*, 1027) and eventually synthesized by Thomas Aquinas in his *Summa Theologica* (1274)<sup>7</sup> and *Summa Contra Gentiles* (1265)<sup>8</sup>. In another branch of Islamic philosophy, primarily in regard to the studies of the Kalam, a similar argument for a first cause was established (see al-Ghazali; *The Incoherence of the Philosophers*, c. 1095)<sup>9</sup>. This argument was also expanded upon, synthesized, and even revitalized in contemporary philosophy by William Lane Craig. However, this argument, contrary to Aquinas', relied on the temporal impossibility of infinite causality and relation, thus logically necessitating a beginning of time.

With the advancement of Enlightenment thinking, Gottfried Wilhelm Leibniz and Baruch Spinoza introduced a new form of cosmological argument, centered around a classical Principle of Sufficient Reason. Today, the most well-known cosmological arguments are the thus mentioned Thomistic, Kalam, and Leibnizian arguments.

## Principle of Sufficient Reason and Causal Principle

The classical Principle of Sufficient Reason (PSR) is the idea that for the existence of every contingent thing, there is an explanatory fact or cause that accounts for such existence; expressed in greater formality: necessarily, if  $y$  is contingent, there is some  $x$  such that  $x$  is a sufficient reason for the existence of  $y$ . There are many different views and interpretations in regard to the strength or soundness of the Principle, in addition to many queries and objections as to whether PSR holds at all. This section will give a brief description of PSR's variations, followed by formulations of the Cosmological Argument that are predicated on those variations.

A key relational property that is foundational to PSR is that of *explanans* and *explananda* (that which explains, and that which is to be explained respectively), which vary in accordance with altering definitions of what they metaphysically encompass. For example, one may categorize explananda only as propositions that are conceptually true, or in a more substantive relation, as entities that actually exist. Similar restrictions then apply to the explanans themselves (similar to the manner of domain restrictions based on the ranges of mathematical functions). It is important to understand that a completely unrestricted version of PSR states that even necessary things or beings require an explanation. While this may seem a rather unconventional approach to the Principle, it is one heavily used by Spinoza and Leibniz in the Enlightenment (1600-1700) to prove the existence of God.

Lastly, PSR is often predicated on the strength of ontological significance: a strong version of PSR states that the Principle applies across every possible world, making it metaphysically (modally) necessary and applicable to those possible worlds, while a weak version suggests that it is merely pragmatic and not necessary, but epistemologically useful. Furthermore, strong PSR entails an absolute explanation - an explanation which leaves no explanatory gaps, i.e., there are no explanatory questions to be asked of the explanantia (explanans) and the explananda.

The argument can be made, however, that restrictions such as those for PSR (i.e. weak PSR in addition to relational restrictions) are contradictory, as restrictions themselves require explanations in accordance with the presupposition of PSR; both bear fruit in the topic of contemporary cosmological arguments. In fact, this is rather subtly hinted at by a majority of both classical and contemporary philosophers who use PSR for the Cosmological Argument (e.g. Leibniz, Spinoza, Almeida)<sup>4,10,11</sup>.

Usually, when proponents of the Cosmological Argument appeal to PSR, they are applying what is known as the classical Causal Principle, which loosely suggests that there is necessarily a cause for the existence of a contingent being. It is easy to recognize the similarity and specificity of the Causal Principle to PSR. Note that the Kalam and Thomistic arguments are con-

---

cretely founded upon these *a posteriori* facts regarding causes and contingency.

Thomas Aquinas deductively emphasizes that changes are states of actualizing something with potential, and each change is preceded by a cause which already possesses the property it actualizes in something else. This implicitly points to an underlying first cause which he calls “God”. Notably, Aquinas doesn’t deny an infinity of time. Instead, he denies an infinity of causes.

Leibniz and Spinoza, on the other hand, do not employ causality in their argument to a great extent at all, at least not how we now understand it. Leibniz refers to PSR more so in the context of metaphysical explanation but doesn’t deny causality to be a type of explanation.

It is important to mention Spinoza’s view on PSR with respect to contingency and necessity. Spinoza theorized that God possesses intrinsic necessity, whereby necessity is part of God’s nature, whereas all particulars have extrinsic necessity, meaning they all are metaphysically necessary, but existence isn’t part of their nature. In this sense, Spinoza classifies an intrinsically necessary God as the sufficient reason for the extrinsically necessary manifest world, considering all particulars that exist within the world as modes or parts of God. In a Spinozan view of intrinsic necessity, the sufficient reason for the existence of God hinges upon the logical necessity of existence being part of God’s nature.

The skepticism about the Principle of Sufficient Reason coupled with the Causal Principle and relational causation is the primary challenge to the total affirmation of the Cosmological Argument in the contemporary field, much of it borne from David Hume and Immanuel Kant.

However, as of recent, there have been many proponents of new ideas and approaches regarding the topic, such as the works of Almeida, Pruss, Gale, and Craig.

To quickly mention Craig before moving on, in his modern Kalam Cosmological Argument (1979), he states that the idea of causality in nature is something every person genuinely believes to be true, attributing causality as an *a priori* fact. In addition, he goes a step further than Aquinas, advocating for an impossibility of infinite time, thus suggesting that time itself is caused by God.

To recap all that has been discussed thus far, the Cosmological Argument is a collection of historical and contemporary reasonings which state that there must be a necessary first cause of the manifest world, since everything which is contingent must be caused either by something necessary or something else contingent. Something is contingent if its existence and non-existence is possible, whereas something is necessary if it exists of its own accord, exists in all possible worlds, or has an impossible non-existence or rather a logical existence.

Giving a rather coarse timeline, the Cosmological Argument traces its roots back to Aristotle (300s BCE), to the Kalam argu-

ment of the Islamic philosophers (1000s), to Aquinas (1200s)<sup>8</sup>, then to Leibniz and Spinoza (1600-1700s)<sup>10,11</sup>, and is now being interpreted in light of more contemporary and analytical reasoning from theorists like Craig, Pruss & Gale, and Almeida (1970-2010s)<sup>4,12</sup>.

The Cosmological Argument is predicated upon the Principle of Sufficient Reason, which, defined loosely, states that every contingent thing, occurrence, or fact has an explanation for its existence. We will soon discuss these topics through the scope of more centralized contemporary arguments.

## Metaphysical Explanation

As its name and attribution would suggest, a metaphysical explanation is one that is strictly metaphysical and usually non-causal in nature, and separate from other forms of explanation such as mathematical and scientific. Many philosophers concerned with such studies use the concept of metaphysical grounding - the relation by which fundamental facts “ground” or “back” other less fundamental facts. Pertaining to metaphysics, grounding is useful for its ability to characterize explanation in the contexts of essence and fundamentality, which is rather apparently non-causal. For example, there being water in a cup is explained (non-causally) by there being H<sub>2</sub>O in the cup.

That being said, there is a certain relation between causation and grounding, as a causal chain may perhaps be grounded by something or some fact.

## Metaphysical Grounding

Metaphysical grounding can be expressed as follows: if a certain fact *R* is true in virtue of a more fundamental fact *P* being true, then fact *P* grounds fact *R*. In this way, metaphysical grounding is a form of non-causal metaphysical explanation that determines or explains less fundamental facts through more fundamental facts. The concept of grounding is one that has been explored recently, primarily by thinkers such as Kit Fine, Jonathan Schaffer, and Paul Audi, and it is seen as an essential tool to the metaphysical classification of facts, propositions, or truth-statements. Moreover, it is potentially a crucial asset in helping rectify the problems produced by conventional cosmological arguments. It is important to first establish a foundational definition for how grounding is ordered. This is where the distinction between partial grounding and full grounding comes in. *P* and *Q* fully ground *R* if no other fact is needed to fully explain *R*. But if both are necessary to fully explain *R*, then *P* and *Q* are individually partial grounds of *R*.

The following important concept is that of well-foundedness of grounding, which asserts the impossibility of regress of grounding. More specifically, chains of grounding with no lower bound cannot occur: they must either possess an altogether different source of explanation separate from the chain

---

itself or be grounded by ungrounded facts.

For the sake of clearer comprehension, imagine grounding chains as integers, where each integer is grounded by one less than it. If we were dealing with all integers including negative ones, we would then have an infinite grounding chain with no lower (or upper) bound. Each integer would be infinitely grounded by another integer below it. As is made clear, there is no true form of explanation, as something still remains to be explained for infinity.

However, imagine we are only dealing with natural numbers now. In this case, we have a lower bound (but not an upper bound; however, grounding does not require an upper bound. The amount of explananda that proceeds from a lower bound can be infinite). That lower bound is zero. This means that the grounding chain of natural numbers will terminate at a point where a natural number can no longer be grounded by one less than it. This natural number “sketch” is what grounding should theoretically and conceptually represent. In fact, theorists like Dasgupta (and Fine)<sup>13</sup> argue that this is what grounding represents (note that our example with numbers serves only as a visualization - it is certainly not a rigorous explanation of how numbers are actually grounded).

Lastly, the most preferable grounding claim is one that poses the least ontological commitments. I will soon analyze whether this approach to grounding is satisfactory to justifying the Cosmological Argument.

## Possible World Metaphysics

Possible worlds metaphysics helps clarify the ontological commitments of both metaphysical grounding and the Cosmological Argument. What, precisely, a possible world is is up for debate, but the basic idea is that any consistent description of a way the world could have been is a possible world. The notion of possible worlds loosely began with Leibniz, who famously suggested that we live in the best possible world in his *Theodicy* (1710). While such a justification of evil is an altogether different topic for discussion, possible worlds metaphysics has transformed into far more than an implicit conception - it has become a medium through which theories of meaning can be properly related. Before turning to the implications of possible worlds, it is worth noting that the actual world is one among all possible worlds conceived.

Through possible worlds, we can determine whether certain beings, facts, or propositions are necessary in the actual world, as we can assess such properties across possible worlds and determine whether they hold in each one (it is in this modal spirit that Alvin Plantinga characterizes God’s necessary existence in his modal Ontological Argument)<sup>14</sup>. More relevant to the Cosmological Argument, however, possible worlds loosen the number of commitments needed to be made in an explanatory

sense, as certain actual physical laws can be disregarded, thus removing the strain of causality and determinism.

Given all we have discussed thus far, the following questions remain. If the actual world is contingent not necessary, what explains, or grounds, its existence? The Cosmological Argument says that God does. But is the manifest world even contingent or apt to be grounded in the first place? Does the notion of possible worlds change the conventional approaches to our Cosmological Arguments? Can contingent things even be properly explained? We discuss all these questions and analyze their answers and implications below.

## Objections to the Cosmological Argument

Now we will briefly turn our attention to the Cosmological Argument’s main objections, after which we will cover the solutions to such objections in Section 5.

### David Hume and John Mackie on Causation and Conceivability

The arguments of David Hume are well known amongst many proponents of the Cosmological Argument. Many have come up with rebuttals to such objections. We will first cover what is perhaps the weaker argument of Hume, and then move on to his argument on composition.

Hume’s main objection to the Causal Principle is the fact that causation isn’t inherently *a priori*, meaning one can conceive of something occurring without a cause. Because of this conceivability, Hume argues that it is possible that something can occur without a concrete cause. John Mackie endorses this reasoning and argues that it is plausible that what is conceivable is possible. Furthermore, with respect to the Cosmological Argument, Mackie argues that the idea of things arising on their own accord should not be any less acceptable than the idea of a God who creates something *ex nihilo*, thereby invalidating the Cosmological Argument.

### David Hume on Composition as Explanation

The second main objection to the Cosmological Argument and PSR, and perhaps one far more compelling (although, once again, seemingly refuted with relative ease by advocates for the Cosmological Argument), is the idea that one can simply explain an infinite collection of contingent things or propositions by explaining each of its constituents. This removes the need to explain the entire collection by something outside of the collection itself. In such a case, the Cosmological Argument’s use of PSR is rendered rather useless, since, as implied by Hume, PSR can be applied to each constituent of said collection by the means of another constituent.

---

The problem with this objection is that it eventually leads to either circularity or regress, for if something in a finite conjunction is explained by something else in that conjunction, then eventually, certain conjuncts will repeatedly explain each other. Or in the case of an infinite conjunction, a regress of explanation occurs.

### Peter van Inwagen's Objection to PSR

We will briefly cover van Inwagen's appeal to modal collapse when PSR is employed, using a *reductio ad absurdum*.

Let us suppose that there is a maximal conjunction of all contingent facts called *P* and its conjuncts  $p_n$ . According to PSR, this *P* must have an explanation, either necessary or contingent. However, for *P* to require a necessary explanation, *P* itself must necessarily be true, and in turn must be necessarily actual. However, if *P* is necessarily actual, then all its following conjuncts  $p_n$  must be necessarily actual as well, giving us the fact that if  $p_n$  is contingent, then it is necessary according to PSR. This seems to be quite illogical with respect to modality.

Arguing for a contingent explanation does not do us much service either, for if PSR accounted for a contingent explanation of conjunction *P*, then the explanation, which we will call *q*, must also be part of *P* (because it is contingent and therefore a conjunct), meaning that explanation *q* explains *q*. However, contingent facts cannot be self-explanatory, which in turn results in a further modal collapse given by PSR.

Thus, the Cosmological Argument's conclusion—due to its foundational structure lying on the nature of PSR—fails in its explanation of the existence of contingent beings.

### The Agrippan Trilemma

The Agrippan Trilemma is the proposition that the proof of any truth necessarily relies on the acceptance of brute facts, the acceptance of an infinite explanatory regress, and the acceptance of self-explanatory facts. These three sub-propositions counter the theory that everything requires a sufficient reason for its existence or its being true. But this argument appears to be a straw man on a purely naive reading of PSR, for even the brute facts would require "sufficient reasons", which, by the definition of brute facts, cannot possibly be given.

Regardless, such objections can still be rectified. We will show in what manner they can be answered in Section 8.

### Michael Almeida on the Cosmological Argument

In his work *Cosmological Arguments*, Michael Almeida introduces a rather novel yet fascinating approach to describing how the Cosmological Argument can be analyzed, using possible worlds metaphysics to loosen the strains of necessity, contingency, and causation/causality, and perhaps most importantly, to

provide a new system of the Argument in a way that addresses universal objections to PSR, rectifies Hume's and Mackie's suggestions about conceivability and causality, and renders van Inwagen's appeal to the modal collapse of PSR irrelevant.

Almeida endorses the idea of genuine modal realism, which is the Lewisian notion that possible worlds are not merely speculative conceptions (or rather sets of speculative conceptions) that may be instantiated. Rather, they are concrete worlds that spatiotemporally exist in a *pluriverse* (Almeida himself refers to his view, rather than Lewis', as theistic modal realism). In Almeida's own words, "the collection of all possible worlds is the *pluriverse* or the totality of metaphysical space" (75). To distinguish this notion from the more broadly understood concept of a physical "multiverse", a multiverse refers to a collection of universes or worlds which are only physically possible and are concurrent with the initial metaphysical conditions of the actual world. The pluriverse on the other hand includes all metaphysically possible worlds. The scope of the pluriverse is far larger than that of a multiverse and is therefore unable to be reduced to one.

Since a pluriverse is a totality of existing possible worlds, everything that exists in this metaphysical totality is necessarily necessary (or, assuming that metaphysical accessibility is modeled by S5, simply necessary). This is because the actual world is not the only world that exists (contradictory as it sounds), but rather, according to David Lewis, the "region of metaphysical reality we happen to inhabit" (Almeida 78)<sup>4</sup>. This means that every single thing (possible and actual) exists in a certain spatiotemporal location, thereby meaning that everything that can possibly exist, does so necessarily. In this sense, that which is to be explained (explananda) exists not only in the actual world, but in the entire pluriverse.

It is here where I wish to mention that when referring to explanantia, Almeida appeals to a strong PSR, or as mentioned in the preliminaries, a PSR that is metaphysically necessary and provides an absolute explanation. Importantly, Almeida states that the traditional view of this strong PSR is that "God necessarily creates the totality of metaphysical space since God necessarily manifests divine glory in creating everything" (75). This relieves the modal collapse given by PSR as suggested by van Inwagen, for according to Almeida, the only way PSR holds is if that which is explained is itself necessary (or rather not contingent) and absolutely explained. Since everything that exists in the pluriverse is necessary, an absolute explanation, that being God, is plausible as it avoids modal collapse.

Almeida also ensures that contingency is not lost in the pluriverse by lowering the standard of similarity or rather lowering the strictness by which entities across the pluriverse can be rendered identical. For example, with loose standards of similarity, the essence of the Empire State Building can be the same across possible worlds. What remains contingent under these low standards is whether the Empire State Building is 1776 ft tall rather

---

than 1454 ft tall, or whether it was built in 1831 instead of 1931. So, in this sense, even though the Empire State Building necessarily exists, properties are contingent based upon the relation between other Empire State Buildings in other possible worlds, but only if the standards of similarity are loosened, otherwise these different Empire State Buildings wouldn't be such at all. Only the actual one would truly be the Empire State Building. In other words, existence is necessary, but properties are contingent according to Almeida.

Here, I will synthesize Almeida's premises and conclusions on the pluriverse and strong PSR in a compact, orderly manner:

1. Possible worlds coexist in a realm of metaphysical totality known as a Lewisian pluriverse.
2. Therefore, the pluriverse and everything in it requires an absolute explanation according to a strong PSR.
3. For a strong PSR to hold, the explanandum must be necessary.
4. Since possible worlds exist in a pluriverse, every fact, property, or being in each possible world exists necessarily.
5. Therefore, the pluriverse and everything in it have an absolute explanation.
6. The absolute explanation for the pluriverse is God.

### Addressing Hume and Mackie's Objections

Moving to causation and the objections of Hume and Mackie, Almeida responds to such refutations. Starting with causation alone, Almeida argues that causeless worlds or "chaotic worlds" do not necessarily exist in the pluriverse and goes as far to suggest that causation itself may even be an illusion in the actual world. However, he argues that this doesn't refute PSR for all possible worlds. Since all things exist necessarily, they all obtain, meaning that in certain possible chaotic worlds, causality itself is not entailed even if an absolute explanation is required. According to Almeida, "the truth of the Principle of Sufficient Reason is compatible with the falsity of the principle of causality" (85). There must be an explanation for causally lawless worlds just as there must be an explanation of causally lawful worlds. Among these explanations, "divine providence is perfectly possible" (Almeida 85)<sup>4</sup>. Almeida implicitly invokes a notion of metaphysical grounding in such explanations, claiming that it is in fact possible that things can occur uncaused (as Hume does), while simultaneously stating that this does not deflate PSR (contrary to Hume).

### Recap of Almeida

As we have just seen, Almeida appeals to a strong PSR, where everything is metaphysically necessary by virtue of possible

worlds existing actually and spatiotemporally in a Lewisian pluriverse. Such a pluriverse contains everything which can possibly exist and therefore accounts for the absolute necessity of all possibilities in addition to possible worlds in which things exist uncaused.

While Almeida's work supports the Cosmological Argument, there are still many gaps that remain to be filled. One noticeable problem is the manner by which causeless worlds operate. The nature of the pluriverse's necessity also throws into question why God is a necessary sufficient reason for it. These topics will be further discussed and answered in Section 9, with the use of metaphysical grounding.

### Kit Fine on Grounding

In his *Guide to Ground*<sup>15</sup>, Kit Fine distinguishes between three types of necessity for grounding, namely normative, natural, and metaphysical necessity. But since the Cosmological Argument largely consists of metaphysical presuppositions and conclusions, we will only refer to this kind of grounding (as Kit Fine implicitly does anyway). In such a sense, Fine defines grounding as "the fact that A grounds the fact that B if and only if the fact that B obtains in virtue of the fact that A (in the generic sense) and it is a metaphysical necessity that if A then B" (4).

We shall now review Fine's stance on grounding as an operation between facts, propositions, and things which exist in the context of truth-making's relevance to grounding. Fine argues that a *worldly* approach to grounding is far more appropriate than a *representational* approach to grounding. The former views grounding as an operation between worldly entities, such as facts or things, whereas the latter views grounding in terms of relations of facts and of propositions. Essentially, a worldly form of grounding is one in which the explanans and explananda are either facts or things, while a representational form of grounding is one in which the existence of a fact makes true the proposition that the object has the property given. Fine argues that this is counter-intuitive, as it would be far more suitable to say that "it is because P (e.g. it is raining) that the fact that P exists, rather than the other way round" (9), pertaining to a worldly view of grounding.

Our following deductions on grounding will, therefore, be done with respect to a worldly approach. That being said, the question remains as to whether the worldly entities of grounding are to be things or facts. Fine seems to be partial to the latter in his writings, but as I show, this at first may not be the best approach in explaining the manifest world or rather the pluriverse. However, certain formulations produced by Shamik Dasgupta may rectify the appeals to non-factive grounding (for different interpretations on grounding, see Schaffer, 2009; 2012 and Rosen, 2010; 2015; 2017<sup>16–20</sup>). For skepticism and critiques

---

on grounding, see J. Wilson, 2014; Hofweber, 2009; Melnyk, 2016)<sup>21-23</sup>.

## Shamik Dasgupta on Metaphysical Rationalism and Grounding as Explanation in PSR

In his work titled *Metaphysical Rationalism*, Shamik Dasgupta explicitly incorporates metaphysical grounding (rather than causation) into the framework of PSR in order to advocate for the concept of necessitarianism (that is the notion that every truth or existence is in fact necessary), and to solve the apparent problems provided by the Aggripean Trilemma in conventional PSR.

It is worth noting that like Fine, Dasgupta views the relation of ground as facts, but contrary to Fine, he sees grounding as a relation as opposed to an operation (or at least articulates his reasonings in his work under this supposition).

Dasgupta distinguishes between two types of metaphysical facts: substantive facts, or facts which are “apt for being grounded” (383); autonomous facts - facts which are “not apt for being grounded” (383). He argues that “every substantive fact has an autonomous ground” (384).

Dasgupta claims that in an explanatory chain, if one eventually reaches a brute fact, that is one which is apt to be grounded but has no ground, then the first explananda ultimately remains unexplained, for the brute fact ultimately remains without explanation. Autonomous grounds don’t face such problems, as the question of their ground is illogical in the first place, (similar to proofs required of mathematical definitions) and therefore their role as explanantia is satisfactory since they don’t require an explanation at all.

There is the further advocacy that all autonomous facts are essential facts, or facts concerning essences of other facts. For example, “water’s essence is grounded by H<sub>2</sub>O” or “it is essential to water that it is made up of H<sub>2</sub>O” are essentialist facts, for they describe that the essence of water is H<sub>2</sub>O. If an explanation chain were to eventually reach an essentialist fact, then the explananda would remain grounded, as there are no remaining explanatory questions to be offered. There is no arbitrariness with essentialist facts as there is with brute facts. H<sub>2</sub>O is the essence of water simply because that’s what water is - there is no possible explanation. This also entails a termination of grounding chains. Chains must ultimately bottom out through some autonomous or essential fact (this is more so an assumption of Dasgupta).

Dasgupta importantly argues that this form of PSR implies necessitarianism, that is, that all explanantia and explananda are necessary. We won’t go deep into this reasoning. All that we should account for is that he assumes that

1. Autonomous facts are essentialist facts.
2. Essentialist facts (by definition) are necessary.

3. Since autonomous facts are necessary, what they ground must be necessarily actual.

This can be attributed to a Spinozistic view of PSR.

The “grounding” formulation of PSR also combats Peter van Inwagen’s appeal to modal collapse, for the conjunct explananda in question does not require an explanation, as it could be autonomous. Additionally, metaphysical grounding conveniently helps us in this case, as even though the conjunction *P* must be explained, its conjuncts don’t necessarily have an explanation. For example, certain facts *M* and *N* ground *M&N*, but together they do not palpably ground just *M* or just *N*. *M* and *N* individually may be without ground. The conjunction maybe grounded even if the conjuncts are not. The premise that conjuncts require an explanation for the sake of a *reductio* fails altogether, and therefore undermines the appeal to modal collapse.

We will not discuss the exact reasonings that lead to Dasgupta’s definition of necessitarianism (see *Metaphysical Rationalism* §7), but we will say that he regards something with metaphysical necessity as being “necessary relative to the world” or rather necessary to something other than its essence - grounded by some other essentialist fact. “Necessitarianism then becomes the view that every fact is either an essentialist fact, or else grounded in essentialist facts” (Dasgupta 395)<sup>13</sup>. Essentialist facts can be expressed as “amodal” and are thus regarded as necessary in all possibilities (Dasgupta 396)<sup>13</sup>.

### Dasgupta’s Implicit Objection to the Cosmological Argument

Dasgupta claims that there is a possibility that something could essentially exist relative to itself rather than to the world - an existence fact of the form “it is essential to *x* that *x* exists” (397). In the case of a grounding chain, this would be the autonomous fact, and it would be a fact in which existence is part of the essence of that fact. But such a fact does not imply divinity. For example, the existence of space-time, which is thought to be independent from all matter, can be thought to have existence as part of its essence, as according to Dasgupta, the necessary existence of space time cannot be thought to be grounded by something else. This is an interesting objection, as it is practically synonymous with the earlier stated problem in Almeida’s genuine modal realism (see section 5). We will attempt to address such objections in section 9.

### Recap of Dasgupta

Before we move on, let us recap Dasgupta’s metaphysical rationalism. PSR can use the explanatory method of metaphysical grounding; grounding facts are divided into two: autonomous facts and substantive facts; all substantive facts are grounded by autonomous facts, which are thought to be facts regarding essence - essentialist facts. Dasgupta’s view of necessitarianism

---

is identical to his formulation of PSR, which states that every fact is either essentialist, or grounded by essentialist facts; all essentialist facts are necessary, and anything which exists necessarily, does so relative to itself or something else (for similar uses of grounding in relation to PSR, see Della Rocca, 2012)<sup>24</sup>.

## Alexander Pruss and Richard M. Gale on Weak PSR and the Cosmological Argument

We have thus far concluded in summarizing the main Cosmological Argument we will be discussing, and have also reviewed each form of grounding we plan to use in our analysis of Almeida. However, while their cosmological argument is not central to our paper, we now discuss Gale & Pruss' weak PSR in order to emphasize the importance of their explanatory approach later on.

In their work titled *A New Cosmological Argument*, Alexander Pruss and Richard Gale<sup>5</sup> argue that to dismantle the view of atheism in philosophy, one must begin with a PSR that is strictly weak in nature - specifically, a PSR that is possible and therefore not necessary, which sets the foundation for a God that is not inherently omnipotent and omni-benevolent, but one who still possesses necessary being. This argument is far more likely to be accepted by skeptics, according to Gale & Pruss.

The argument of these two scholars begins with the idea that every possible world contains a Big Conjunctive Fact (BCF), which is a collection of all facts within that possible world. This Big Conjunctive Fact contains necessary propositions, meaning it exists identically in all possible worlds. However, this Big Conjunctive Fact also contains a Big Conjunctive Contingent Fact (BCCF), which is a collection of all contingent facts, meaning BCCF will vary across possible worlds, unless BCCF is identical across possible worlds, in which case those worlds will also be identical. BCF by its nature is self-explanatory due to its necessity, however, BCCF is contingent. Gale & Pruss assign the variable  $p$  to BCCF in the actual world. According to weak PSR, for proposition  $p$ , there is some possible world  $w_1$  (Gale and Pruss call the actual world  $w$ ) where for  $p$  and some  $q$ , the proposition that  $q$  explains  $p$  exist in  $w_1$ 's BCF. To assert that PSR holds in the actual world, Pruss & Gale argue that because  $p$  is a BCCF which exists in  $w_1$ , it is identical to the BCCF of  $w_1$  itself, which is called  $p_1$ , meaning the BCCF are identical. If  $p_1$  and  $p$  are identical as established, then the actual world must be identical to  $w_1$ , hence meaning that in the actual world, there is proposition  $p$  and  $q$  such that  $p$  explains  $q$ .

As to what  $q$  represents, Pruss & Gale argue that such cannot be a scientific form of explanations, as laws are inherently contingent and therefore would fall under  $p$ , resulting in a contradictory self-explanation of contingent propositions. Following this, the reasonable conclusion is made that  $q$  is a personal explanation and therefore "reports the intentional action of a contingent

being or [ $q$ ] reports the intentional action of a necessary being" (Gale & Pruss). It can then be concluded that the being must be necessary, for if it was contingent, the resulting explanation would give way to an infinite regress.

As for the character of  $q$  itself, Gale & Pruss postulate that  $q$  is contingent, for if  $q$  was necessary and therefore a conjunct of every possible world's BCF, then  $p$  would fall under the BCF of every possible world, for a necessary  $q$  inherently results in an entailment of  $p$  since an explanation of  $p$  quite logically entails that  $p$  exists. But since  $p$  is a conjunct of every BCF, and simultaneously a conjunct of the actual world's BCCF, then each possible world possesses the same BCCF, resulting in possible worlds that are all identical, which is both epistemologically and metaphysically unsound. Therefore, " $q$  is a contingent proposition that reports the intentional action of a necessary being" (Gale & Pruss)<sup>5</sup>.

I claim, however, that such deductions imply an infinite regress. For if an explanation is contingent, does it not require an explanation?

Let us finish this section by mentioning that Pruss & Gale derive the notion of "a necessary supernatural being who is very powerful, intelligent, and good and [who] freely creates the actual world's universe" (Gale & Pruss)<sup>5</sup>. Such an approach to PSR and the Cosmological Argument is assuredly controversial, yet less epistemically demanding for the skeptic or the atheist.

In short, Gale & Pruss argue that there is a possible world in which a certain Big Contingent Conjunctive Fact about the actual world is explained by some  $q$  in that possible world. Since this BCCF exists in the actual world and in another possible world, and since the BCCF includes in itself all possible contingent facts or their negations, those two worlds are identical. This means that BCCF has an explanation  $q$  in the real world. This conjunct  $q$  contingently reports the action of a necessary being, who Gale & Pruss argue must be a personal and powerful God.

With our preliminaries and literary review sections concluded, we will now move forward to my reasoning on how metaphysical grounding can fix the problems of the classical Cosmological Argument in addition to the problems of the mentioned contemporary arguments (for further contemporary cosmological arguments, see Rasmussen, 2009; 2010<sup>25,26</sup>; Koons, 1997; 2008; 2014<sup>27-29</sup>; O'Connor, 2004; 2008; 2013)<sup>30-32</sup>.

## The Cosmological Argument with Metaphysical Grounding

All our discourse thus far culminates in one universal question: how can metaphysical grounding be used in a way which properly structures the Cosmological Argument and furthermore strengthens it? To begin dissecting this question and analyzing such ways it can be used, we must also ask which form of explanation is most appropriate in the context of PSR and the

---

Cosmological Argument, and by virtue, turn to the best possible explanatory approach given by grounding.

I think it is uncontroversial that the best explanation is one that is as complete and definite as possible. However, to reach such a point without introducing any unnecessary gaps or discomforts in the reasonings of many different philosophers, it is better if our absolute explanation begins with the introduction of one with fewer ontological commitments. For this reason, we begin with a generalization of grounding expressed through the Thomistic argument. Then, we extrapolate to a much more absolute explanation - one in which all explananda and explanantia (which are apt for explanation) are fully and totally explained - including possibilia and actualia. In addition, it is founded upon what God represents, with Almeida's idea of the pluriverse as our backdrop. We will then finally conclude with more general comments on non-factive grounding vs. factive grounding, in addition to certain things to note about the reasonings of Gale & Pruss.

### **Generalizations of Grounding with Implicit use of Dasgupta's PSR**

Starting with generalizations of grounding, we must recognize that everything which is grounded in our world must furthermore be grounded by something else - this is a non-factive approach to grounding, where the relata, or "grunder" and "grounded", may include objects in addition to facts.

Expressed in terms of a more conventional, factive approach, every non-fundamental fact about our world must be grounded by some other fact (we should note that in Kit Fine's very same *Guide to Ground*, these terms are used to describe different definitions of ground. That being said, we still use these terms as defined here for the sake of convenience). For example, the fact that the paint which is used on a canvas is purple is grounded by the fact that red and blue paints were mixed. However, what grounds the fact that red and blue paints themselves were mixed? Depending on your view of grounding, the fact that one paint is red and another is blue at least partially grounds the fact that red and blue paints were mixed. We say partially, as clearly the mere color of the separate paints isn't enough to justify a full ground. The mixing didn't occur by virtue of the individual paint colors alone.

We could then say that the fact that one paint is red and another blue is partially grounded by the fact that one paint is red. It is easy to notice a pattern. At what point does the ground terminate? A chain of ground can be furthermore grounded either by some fact which itself requires a ground, or some fact which is autonomous. To avoid a regress of grounding, some possible chain must ultimately be grounded by something which is inherently ungrounded (an autonomous fact). Or, if we are to accept that an infinity of ground is possible, (by say, postulating that an explanation itself requires a ground) then that

whole infinity must itself be grounded by something ungrounded (again an autonomous fact). Note, these last points hinge on Dasgupta's notion of autonomous facts.

### **The Thomistic Model Expressed Through Grounding**

This is where the Thomistic argument comes in, which we have already briefly covered previously. As Almeida himself puts it in *Cosmological Arguments*, Aquinas views causation as "a broad relation of ontological dependence between things. It is part of the very idea of cause and effect that effects depend ontologically on their causes" (24-25). This view of causality allows us to express the conceptions of the Thomistic argument in terms of grounding. Instead of each contingent thing being actualized by a cause which is instantiated by something which already exists, we can express each thing or fact as being strictly grounded by a preceding thing or fact. This way of expressing the argument allows us to relieve any negative appeals to causation, whether in the form of a possibility of causation's deflation as postulated by Hume (Hume's objection found in Section 4), or in the objections to Aquinas as to how causation actually operates between contingent things. Furthermore, it strengthens Almeida's claim that there exist causeless worlds in the pluriverse.

So, if we are to express the Thomistic argument in terms of factive grounding, we can therefore say that every fact is grounded by something before it, which in turn is grounded by some other fact, and so on until we reach an ungrounded, autonomous fact. This autonomous fact grounds the whole chain. Through grounding, we can come to the same conclusion as Aquinas, but with different nomenclature - that there must be a first ungrounded ground which partially grounds every fact. This ungrounded ground can be referred to as "God".

It is also crucial that we distinguish between grounding and causation semantically. How does "fact or thing *M* grounds fact or thing *N*" differ from "fact or thing *M* causes fact or thing *N*"? Well, the cause of a certain fact or truth is different from the metaphysical character of that fact or truth. For example, the causal reason as to why there is a cookie jar on the table may be attributed to someone placing it there. However, the metaphysical reason as to why a cookie jar is on the table has to do with the metaphysical nature of the jar itself. For instance, one must explain why there are cookies, why they are often placed in jars, and why there even exists the relevant physical matter which composes the cookies and cookie jars. These are metaphysical reasons that explain, say, why a cookie jar is in fact a cookie jar.

The benefit of this argumentation is that it avoids any negative appeal to PSR and modal collapse as shown by Peter van Inwagen (see section 7 on Dasgupta). For although we are adhering to the main deductions of the Cosmological Argument, we are doing so in such a way which doesn't necessarily require

---

the same version of PSR that the Causal Principle does. This means that most modal objections to PSR are inappropriate in the context of grounding.

### **The Primary Problems of Our Current Models**

If we are to employ a factive type of grounding, as the majority of theorists would, then our reasoning alone doesn't suffice in showing that God is the only possible explanation for everything which exists. After all, there are many other facts (notably including non-essentialist facts) which are an ungrounded ground for other facts, such as the Principle of Non-Contradiction and bivalency. The case can be made, however, that certain ungrounded facts can only ground certain other facts. It would not be very satisfactory, for example, to say the fact that a car is red is fully grounded by the Law of Non-Contradiction. In fact, according to certain principles of Kit Fine, the statement would plausibly be false.

Perhaps we can instead say that all ungrounded facts, including essentialist facts, are simply facts about God. But conversely, we can also say that these ungrounded facts are simply facts about the manifest world or the pluriverse (if we use Almeida's argument for the latter). After all, these facts are within the manifest world itself. We don't have any direct means of attributing ungrounded facts to God rather than the manifest world. Since we wish to extend our explanatory strength, it is preferable that we view the manifest world as the pluriverse.

If we extrapolate to Almeida's absolute explanation of everything which exists, as I believe we should, we must establish what the nature of God is (purely from a metaphysical standpoint). Is God separate from the pluriverse, and not simply the pluriverse itself? The problem of the metaphysical nature of God closely correlates to the main gap in Almeida's argument and the main skepticism of Dasgupta. That is, if an absolute explanation is required by strong PSR for everything (or in our case, every fact) in the pluriverse, then why should God (or facts about God)—who is also necessary—not require an absolute explanation? In other words, why should we assume that the pluriverse, or facts about the pluriverse, are not essentialist themselves. And if God doesn't require an explanation on account of having necessity, then why should the pluriverse require an explanation itself? Is it because God simply is the pluriverse? It seems Almeida's argument falls short in this area, and conveniently, such a problem mirrors the one we mentioned above in regards to ungrounded facts and Dasgupta.

### **The Manifest World Must Be Grounded by Something Separate From it**

To determine why God doesn't require an explanation, we must somehow distinguish God from all that exists within the pluriverse. Is God partly outside of the pluriverse or is God simply

the pluriverse itself? Expressed in terms of a factive grounding (which is more preferable), are ungrounded facts of God merely ungrounded facts of the pluriverse? Given our explanatory suppositions and the less controversial approach of factive grounding, it is an argument worth clarifying. Note that our problem is applicable for both factive and non-factive grounding.

Let us review the nature of God. If the facts about the pluriverse need to be grounded, then there must exist some facts outside of the pluriverse which ground the facts of the pluriverse. In accordance with the Cosmological Argument, we can call these outside facts autonomous facts about "God." The principle can be restated in terms of non-factive grounding as implied above, but for the sake of simplicity, we will speak only in terms of factive grounding for now (see section 9.6 for an analysis on factive vs. non-factive grounding).

To make an appropriate formulation, we must first consider the nature of the pluriverse. Even though the pluriverse is the totality of metaphysical space, there are still some aspects of it which remain unanswered. Caleb Camrud, in correspondence, believes in certain facts about the pluriverse which "cry out for explanation" - most notably, that the actual world is the world that it is rather than some other world. There is a question of why the pluriverse is structured the way it is. But with this, an additional query arises: does the fact of the pluriverse's structure elicit the need for ground? I argue that such facts are substantive and not autonomous or essentialist, the same way facts about certain atomic structures are (seemingly) substantive. It would then seem that facts about the pluriverse's structure are deemed necessary relative to the pluriverse (according to Dasgupta's view). In other words, the facts of the pluriverse's structure are grounded by facts about the essence of the pluriverse. But isn't the essence of the pluriverse characterized by its structure? That is, isn't it essential to the pluriverse that it has the structure that it has? According to Dasgupta's necessitarianism, there is no reason to believe otherwise. This would mean that the facts of the pluriverse's structure ground the facts of the pluriverse's structure. On one hand, the facts of the pluriverse's structure are not necessary relative to themselves, but at the same time, they are grounded by themselves. This takes the appearance of a brute fact as opposed to an autonomous fact. There is an inherent arbitrariness in why the facts of the pluriverse are what they are. Our explanation is vacuous. But according to Dasgupta's view that grounding terminates in an autonomous fact, there must be some autonomous and essentialist fact which grounds the structural facts of the pluriverse.

These autonomous facts must be separate from the pluriverse, otherwise we run into the problem given above. Furthermore, these autonomous facts must be kept separate from the manifest world altogether. We can attribute these autonomous facts to what we will call "God." This in turn means that God is not the pluriverse itself, but is rather separate from it (this idea can

---

be explored in future research regarding other philosophical arguments such as physicalism). Our argument additionally works without the use of genuine modal realism and is equally applicable with non-factive grounding as our framework.

Note that we have articulated our argument in the context of necessitarianism in a way Almeida's argument could not. By invoking Dasgupta's grounding explanation for PSR, we set the foundation for necessitating or grounding certain facts through other essential facts. Our reasoning stems from distinguishing between facts which can be grounded in a satisfactory way (that is, without tautologies or brute facts) and facts which are not apt to be grounded. Using Almeida's method alone, we have no way to determine which facts can be explained and which facts cannot be explained due to their essential nature. If we wanted to explain certain things about the structure of the pluriverse, we could only do so under the conventional definitions of contingency and necessity. If certain properties of the pluriverse are necessary, then we once again are not compelled to explain them without being compelled to explain God. If certain explainable properties are contingent, then we once again reach modal collapse. This doesn't happen under a grounding semantic involving substantive and autonomous facts.

One might object to the formulation of my argument. Even if they are correct, I still hope that this reasoning provokes further questions and answers regarding grounding's potency in the Cosmological Argument.

### The Relevancy of Pruss & Gale's Argument

Recall the argument from Pruss & Gale for the sake of showing its relevance to Almeida's reasoning. It is worth noting that the argument for weak PSR (W-PSR) ultimately entails strong PSR. Graham Oppy (2000) argues that if there is a possible conjunct  $p_1$  of the Big Conjunctive Fact of some possible world, then according to a hypothesis in the argument of Gale & Pruss,  $p_1$  must be true in the actual world. But if W-PSR is to be accepted, then  $p_1$  has an explanation in some possible world, leading to a contradiction of the nature of  $p_1$ . Hence, when one begins with W-PSR, he or she will ultimately come to the conclusion yielded by strong PSR. In this sense, one begins with a system of explanation which yields compromise and does not assert any unfavorable metaphysical conditions, but then extrapolates to a more absolute conclusion which (according to Pruss & Gale) does not have a good reason to be rejected based solely on the process of reaching it.

### Non-factive vs. Factive Grounding

In order to fully affirm the semantics of our grounding explanation, it is pertinent that we distinguish between non-factive grounding (grounding with "things" as the relata), and factive

grounding (grounding with facts as the relata - the more conventional view).

### Non-factive Grounding's Apparent Merit

Something noteworthy about factive grounding is that it seems to rely on non-factive grounding. For example, take the fact that  $m$ . In this case,  $m$  seemingly refers to some thing. As Fine's worldly approach to grounding implies, it is the existence of  $m$  that grounds facts about  $m$ . In other words, the fact that  $m$  is grounded in  $m$  itself. To use an example, one can say "the fact it is hot outside" can be grounded by the heat itself that is outside. This notion can be extrapolated: it turns out that any fact about the manifest world is grounded in the existence of the manifest world itself. In this sense, it would not be far fetched to say that certain things ground other things, and that certain things ground other facts. For without the things themselves, the facts about those things would not exist.

### Factive Grounding in Terms of Dasgupta's PSR

As we just mentioned, factive grounding apparently implies non-factive grounding. However, this issue seems to be alleviated when Dasgupta's view on essence and necessitarianism is taken into account. Notice how the relation "fact  $m$  is grounded by  $m$ " is directly synonymous with the notion that a certain fact is necessary relative to certain essential facts. In other words, "a certain fact  $m$  is grounded by  $m$ ." This is the very same relation! However, in the context of Dasgupta's regimentation, this is an essentialist fact. This relation is not apt for being grounded. In other words, our grounding chain begins with an autonomous fact, not a thing. Thus, there can be no question of whether the autonomous fact is grounded by some thing. It simply is. In this way, factive grounding can be preserved.

### Factive Grounding over Non-factive Grounding

Given what we have just discussed, it would be logical to assume that factive grounding is a more satisfactory explanatory approach. For when something appears to be non-factively grounded, it is really factively grounded. Secondly, our form of non-factive grounding establishes different entities of relata across a relation: things grounding facts. This would go against the conventional grounding views of Kit Fine. Additionally, if things were to be the relata of our ground, what would the ungrounded things actually represent? What would an autonomous thing be? It seems that factive grounding in the framework of the Cosmological Argument is less susceptible to external objections and also more strict in its ontological assertions. Perhaps the biggest objection to factive grounding could be the lack of explanation of things themselves. Certain theorists (like Jonathan Schaffer) argue that things can ground other things. If we are speaking purely factively, what can account for these things?

---

Maybe the problem can be addressed if we express the things in terms of facts. However, this might not be completely satisfactory for someone who would strictly advocate for the grounding of things.

## Recap

We have thus far shown that the Thomistic argument can be expressed in terms of a grounding-PSR foundation proposed by Dasgupta. Because this model implies necessitarianism and because grounding operates differently to causation, modal collapse can be avoided. Instead of a first cause which causes everything else, we have autonomous, ungrounded facts as the first ground for every other fact. The same idea can be extrapolated to the pluriverse.

But the question remains: what are these ungrounded facts? Are they facts about the manifest world (or rather the pluriverse)? Or are they facts which are separate from the pluriverse and attributed to that which we can call “God”? Well, according to Dasgupta’s model, they must be. There are facts about the structure of the pluriverse which are apt to be grounded. However, the pluriverse itself cannot account for this ground, as it would result in a tautology of the form “fact *P* grounds fact *P*.” So, essentialist facts outside the pluriverse must ground facts about the pluriverse. Since Almeida’s reasonings also help relinquish the objection to causeless possible worlds and Hume’s appeal to conceivability, this form of argumentation is more favorable than a classical formulation. Furthermore, it is clear that a factive method of grounding is preferable to a non-factive method, as it poses less ontological commitments and in some form accounts for non-factive grounding.

## Final Thoughts

It has been shown that the use of metaphysical grounding can improve contemporary and classical cosmological arguments in addition to addressing most if not all of its objections. Almeida’s contemporary argument has already sought to address certain problems (such as conceivability entailing possibility and modal collapse), but it falls short in explaining why the pluriverse itself cannot be a sufficient reason for everything existing within it. Introducing a grounding relation, where all facts are necessary and explained by necessary autonomous facts removes the need for a PSR that operates through contingency. Additionally, it gives us a reliable framework for judging what facts need to be grounded, and what facts do not. The idea of autonomous ungrounded facts explaining everything else also points to a factive regimentation, where the relation that things ground facts is ultimately a fact itself.

Our argument suggests that there is something outside of the manifest world. As Dasgupta implies, what this fact represents is ultimately unclear. It would be disingenuous for us to conclude just

from this argument alone that there is a supernatural, omnipotent, omniscient God which grounds all that is manifest. However, our argument opens the door to such a truth. Research on the nature of this autonomous fact or ground can be conducted by others who wish to search for and argue for the existence of God. But very much like Pruss & Gale, our argument is meant to set the framework for such research, and show that grounding may very well have merit in the scope of the Cosmological Argument. While this may sound very speculative, I respond that the topic itself is speculative and unclear.

While one may not be willing to accept the direct reasoning of this paper, it is my hope that such inquiries and attempts to synthesize grounding in the Cosmological Argument may in fact change the way in which the existence of God and the manifest world is viewed from a philosophical standpoint. Perhaps the introduction of grounding may succeed in changing the view of the non-theistic skeptic.

## References

- 1 D. Hume, *An Enquiry Concerning Human Understanding*, London, Hume 1748 available online.
- 2 D. Hume, *Dialogues Concerning Natural Religion*, London, Hume 1779 available online.
- 3 P. Inwagen, *An Essay on Free Will*, Oxford University Press, New York.
- 4 M. Almeida, *Cosmological Arguments*, Cambridge University Press, Cambridge.
- 5 R. Gale and A. Pruss, *A New Cosmological Argument*, vol. 35, pp. 461–476.
- 6 D. Lewis, *On The Plurality of Worlds*, Blackwell, Oxford.
- 7 *Summa Contra Gentiles Book II: Creation*, University of Notre Dame Press, South Bend, IN.
- 8 S. T. Aquinas, *Summa Contra Gentiles Book I*, University of Notre Dame Press, South Bend, IN.
- 9 al Ghazali, *The Incoherence of Philosophers*, Brigham Young University, 2nd edn.
- 10 G. Leibniz, *Theodicy*, Open Court Press, La Salle, IL.
- 11 B. Spinoza, *Ethics*, Hafner Press, New York, NY.
- 12 W. Craig, *The Kalam Cosmological Argument*, Macmillan, London.
- 13 S. Dasgupta, *Metaphysical Rationalism*, vol. 50, pp. 379–418.
- 14 A. Plantinga, *The Nature of Necessity*, Oxford University Press, Oxford.
- 15 K. Fine, *Guide to Ground*, pp. 37–80.
- 16 J. Schaffer, *On What Grounds What*, vol. 2009, pp. 347–383.
- 17 J. Schaffer, *Grounding, Transitivity, and Contrastivity*, pp. 122–138.
- 18 G. Rosen, *Metaphysical Dependence: Grounding and Reduction*, Oxford University Press, Oxford, pp. 109–136.
- 19 G. Rosen, *Real Definition*, vol. 56, pp. 189–209.

- 
- 20 G. Rosen, *Metaphysical Relations in Metaethics*, Routledge, New York, pp. 151–169.
- 21 J. Wilson, *No Work for a Theory of Grounding*, vol. 57, pp. 535–579.
- 22 T. Hofweber, *Ambitious, Yet Modest, Metaphysics*, vol. 2009, pp. 260–289.
- 23 A. Melnyk, *Grounding and the Formulation of Physicalism*, vol. 2016, pp. 249–269.
- 24 M. Della Rocca, *Violations of the Principle of Sufficient Reason (in Leibniz and Spinoza)*, pp. 139–164.
- 25 J. Rasmussen, *From a Necessary Being to God*, vol. 66, pp. 1–13.
- 26 J. Rasmussen, *A New Argument for a Necessary Being*, vol. 89, pp. 351–56.
- 27 R. Koons, *A New Look at the Cosmological Argument*, vol. 34, pp. 193–211.
- 28 R. Koons, *Epistemological Foundations for the Cosmological Argument*, Oxford University Press, Oxford, pp. 105–133.
- 29 R. Koons, *A New Kalam Argument: Revenge of the Grim Reaper*, vol. 48, pp. 256–67.
- 30 T. O'Connor, *And This All Men Call God*, vol. 21, pp. 417–35.
- 31 T. O'Connor, *Theism and Ultimate Explanation: the Necessary Shape of Contingency*, Wiley-Blackwell, London.
- 32 T. O'Connor and D. S. Oderberg, *Could There Be a Complete Explanation of Everything? in Goldschmidt 2013*, vol. 4, pp. 22–45.