

A Novel Case for Theism
Unifying the Best of Ontological and Cosmological Reasoning

PhD by Papers

By

SOUFIANE HAMRI

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Department of Philosophy
School of Philosophy, Theology & Religion
College of Arts and Law
University of Birmingham
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Abstract

Among the most influential arguments for the existence of God, cosmological and ontological arguments have a special standing. This thesis aims to bridge the gap between these arguments, and combine their strengths, so as to establish the existence of God, understood as a significantly powerful and knowledgeable being that is the ultimate cause of everything other than itself. After highlighting several challenges that face arguments grounded in Perfect Being Theology (PBT), I propose the concept of a 'sovereign being', namely a self-subsistent being that has significant control over the happenings of the world, as a promising alternative foundation for theistic argumentation. The thesis consists of six self-contained papers defending various aspects of the proposed case for theism. This includes a novel First Cause argument and two arguments for the existence of a unique sovereign being. I supplement my deductive reasoning with an inductive argument to further support my overall conclusion. The papers are intended to uncover hitherto unnoticed connections between some general metaphysical theses and the debate about the existence of God. They should appeal to a broad audience of metaphysicians who may or may not have an interest in the philosophy of religion.

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Introduction and Synopsis of Each Paper

For traditional theists, God is minimally conceived as the ultimate efficient cause of the existence of every other being. God is also minimally believed to have great power and knowledge. A minimum requirement for cogent cases for the existence of God is to provide good arguments for His position at the root of the causal order, as well as for the great extent of His power and knowledge.

Cosmological and ontological arguments have a special standing among the most influential arguments for the existence of God. Cosmological arguments aim to establish a First Cause as the ultimate cause of the existence of every other being. However, these arguments are typically silent about the nature of the First Cause, making it impossible to build a case for the existence of God on the sole basis of a First Cause argument.

Ontological arguments begin from the concept of God and aim to establish His existence on purely a priori grounds. There are many concepts of God that can be used as a starting point for an ontological argument. For example, God can be taken to be the greatest possible being. Assuming that there is a successful derivation of the existence of a God so conceived, it remains open whether God played any causal role in the existence of other beings.

There is a complementarity between the strengths of cosmological and ontological arguments for justifying the existence of God. On the one hand, while cosmological arguments establish the existence of a First Cause, they are unable to motivate the identification of this First Cause with God. On the other, while ontological arguments can justify the existence of a being who is plausibly extensively powerful and knowledgeable, they may be of little help in justifying the role of First Cause that this being needs to play to be identified with God as traditionally conceived.

My research aims to find a link between ontological and cosmological reasoning that both strengthens and bridges the gap between them in such a way that theists can successfully establish the existence of an immensely powerful and knowledgeable God that is the ultimate cause of the existence of every being other than Himself.

The natural starting point for the ontological component of my case for theism was Perfect Being Theology (PBT), which has always played a central role in Western natural theology's project of offering cogent arguments for the existence of God. According to PBT, God is the greatest possible being or, as famously expressed by Anselm, that than which no greater can be conceived. As argued in Paper 1, I have become convinced that arguing for the existence of God from the standpoint of PBT is fraught with challenges. This is due to PBT's reliance on an objective evaluative notion of greatness. The primary challenges facing a PBT-based natural theology concern the coherence of the concept of the greatest possible being, PBT's apparent lack of resources for securing God's uniqueness and His position at the root of the causal order, along with PBT's extreme vulnerability to the various forms of the problem of evil. While these challenges may not necessarily be fatal to natural theology – in which PBT plays a foundational role – I conclude that those sympathetic to the project of natural theology would be better-off exploring alternative foundations for their case.

In the underexplored territory of other traditional concepts of God, I found one concept to be particularly promising, namely that of the sovereign being, a self-subsistent being that has significant control over the happenings of the world. This concept is a legitimate foundation for a case for theism given its faithfulness to the ordinary concept of God. Most importantly, the concept of a sovereign being, in its non-reliance on a realm of objective

evaluative standards, can be the basis of a natural theology that does not face the aforementioned challenges that afflict its PBT-based counterpart.

This thesis aims to show how fruitful the concept of a sovereign being can be for theistic argumentation. I intend to do so by defending a case for the existence of a unique sovereign being that has great power and knowledge, and that is an ultimate cause of the existence of everything beside itself. Such a being would undoubtedly be worthy of the name 'God'.

The cosmological component of my case for theism consists of the following First Cause argument.

1. **Causal Fundamentality:** every caused being is ultimately caused by some uncaused beings (premise).
2. **Ontological Rationalism:** every being is such that either
 - a. It is independent: it exists in virtue of its essence independently of other beings.
 - b. Its existence is caused by other beings (premise).
3. Every caused being is ultimately caused by some independent beings (from 1 and 2).
4. There cannot be more than one independent being (premise).

Therefore,

5. There is a unique independent being that is an ultimate cause of the existence of all other beings (from 2, 3, and 4).

Each of the three premises of this argument is defended in a dedicated paper.¹

¹ Premise (1) is defended in Paper 2. Premises (2) and (4) are defended in Papers 3 and 4, respectively.

The ontological component of my thesis contains two arguments for the existence of a unique sovereign being. These complement the First Cause argument developed in earlier papers by justifying the great extent of the power and knowledge of the First Cause. The key to the unification of my arguments is in the independent existence that both the First Cause and a sovereign being enjoy.

To strengthen my conclusion, I offer an alternative route to it, which takes the form of an inductive argument. I defend the claims that the existence of a unique sovereign First Cause is the best explanatory hypothesis of the most general causal features of the world.

I chose to make the six papers constituting this thesis self-contained. In so doing, each paper's contribution can be appreciated independently of its role in my case for theism. I also chose to cast the papers defending my First Cause argument as papers in general metaphysics without much apparent reference to theistic argumentation. This was intended to broaden their target audience to all parties of contemporary debates in fundamental metaphysics. In the remainder of this introduction, I provide a synopsis for each of my papers.

Synopsis of each paper

Paper 1: Ontological Arguments and Objective Value

Ever since Anselm's statement of the ontological argument, significant efforts have been devoted to diagnosing the fatal flaws of his intriguing proof and the other ontological arguments that have been championed by other philosophers.

Instead of contributing to this debate, my aim is to challenge standard ontological arguments based on their underlying assumption of an objective evaluative notion of value

or greatness. I argue that the proponents of these arguments must face serious challenges before their arguments can be set in motion. These challenges concern value commensurability, the indefinite extensibility of greatness, the uniqueness of God, the bridge between the concept of God and His actual existence, evil, and the overall theoretical virtue of the worldview that is most hospitable to the considered arguments.

I conclude that theists who wish to defend ontological arguments are better advised to rely on other concepts of God that do not assume a notion of objective value.

Paper 2: Causal Fundamentality

I present an argument for causal fundamentality, understood as the claim that the causal history of every being, whose existence has a causal explanation, includes some uncaused beings. I argue this to be a consequence of an actualist account of metaphysical modality whose novelty lies in its hybrid dispositional-essentialist foundation.

I argue that my modal theory is extensionally correct and minimalistic. Its range of metaphysical necessities and possibilities is just as wide as needed to capture the pre-theoretical notion of modality. Moreover, my theory is immune from the necessitism of standard essentialist accounts of modality and addresses the challenge of global possibilities facing dispositionalist modal theories thanks to its essentialist component.

Paper 3: Ontological Rationalism

Ontological Rationalism (OR) is the thesis that every concrete being is either dependent or independent. The existence of a dependent being is due to the causal activity of other beings, while an independent being is one that exists in virtue of its essence independent of

the causal activity of other beings. In either case, the existence of a given concrete being can be explained by the essence of the said being or the causal activity of others.

I begin by considering the prospects of motivating OR on the basis of a commitment to a strong version of the Principle of Sufficient Reason (PSR). After discussing several objections directed to the PSR, I strengthen the case against the principle by deriving a new paradox of sufficient reason that does not rely on a contested premise of van Inwagen and Bennett's classical paradox. I conclude that finding another ground for OR would be more promising. I then consider a Restricted Principle of Sufficient Reason (RPSR) due to Pruss, and argue that it is a good ground to rest one's commitment to OR on.

To strengthen the case of OR, I provide a direct modal argument for it and address a main threat to this argument's success.

Paper 4: Fundamentality and Essential Existence

Positing the existence of fundamental beings is a popular strategy for explaining the existence of derivative (non-fundamental) beings. First, I argue that, if the theoretical role of fundamentalia is to be ultimate ontological explanations, then these fundamentalia must exist in virtue of their essences. I then dedicate the main thrust of my argument to supporting the conclusion that there cannot be more than one such fundamental being.

After assessing two popular foundationalist theses, Physical Atomism and Cosmic Priority Monism, in light of the results of my arguments, I conclude that a plausible foundationalist thesis must posit a unique fundamental being whose identity is self-contained.

Paper 5: A New Look at the Ontological Argument

Standard ontological arguments have their roots in Perfect Being Theology (PBT), which defines God as the greatest possible being. PBT-based ontological arguments have been challenged on various grounds and considered worthless by many philosophers, theists, and atheists alike. My aim is to defend a new family of ontological arguments that are based on another concept of God, which is at least as faithful as PBT to the traditional concept. I argue that these new ontological arguments are not vulnerable to the main objections levelled against standard ontological arguments. Moreover, these arguments offer the prospect of unification with cosmological arguments and a shift of the focus from ontological arguments to central issues in fundamental metaphysics that are usually taken to be neutral in terms of theological perspectives. If I am right, this could lead to fruitful dialogue between philosophy of religion and general metaphysics.

Paper 6: Naturalism and Theism on the Balance of Causality

The debate regarding whether naturalism or theism ought to be rationally preferred has been largely dominated by specific arguments for or against these worldviews. A more systematic way of adjudicating this dispute would be to formulate both worldviews as competing hypotheses to explain a given body of evidence and assessing, with the same method of theory choice operative in science, which hypothesis deserves to be rationally preferred. I illustrate how such an assessment can be performed by conducting one whose body of evidence is restricted to general considerations about causality – i.e., the only type of consideration taken into account in traditional theistic cosmological arguments.

To perform this assessment, I formulate two minimal versions of naturalism and theism, and argue that the considered theistic hypothesis is at least as explanatorily virtuous as its

naturalistic rival and, crucially, that it is simpler. This version of theism ought then to be preferred to naturalism.

I conclude by paving the path to justifying the attribution of the main traditional divine attributes to the first cause postulated by the considered minimal version of theism.

Paper 1

Ontological Arguments and Objective Value

1. Introduction

Ontological arguments are arguably among the most fascinating and controversial in the history of philosophy. Debates over this class of theistic arguments have continued since the first ontological argument was presented by Anselm of Canterbury in the 11th century. The likes of Aquinas, Descartes, Leibniz, Kant and, more recently, Gödel and Plantinga, have all contributed to the debate by either advancing their own versions of the argument or seeking a decisive refutation of all ontological arguments.²

Ontological arguments are aimed at being a priori proofs of the existence of God. They move deductively from a given concept of God to His actual existence. Many atheists and theists alike find it highly suspicious that the actual existence of something can be proven from the sole consideration of its concept. Given that much has been said of the shortcomings of these arguments, I shall not discuss these limitations here.

Instead, I seek to challenge ontological arguments based on their reliance on an assumption that is at the foundation of their standard versions. These standard versions as presented by Anselm, Descartes, Leibniz, Gödel, and Plantinga share in common the assumption that there is a scale of objective value according to which beings can be ranked by overall excellence, perfection, or greatness. This objective value assumption underlies the concept

² For an introduction and a rich bibliography regarding ontological arguments, including the primary historical sources, the reader is referred to Oppy (2020).

of God that is the starting point of these standard ontological arguments. God is taken to be a supreme or perfect being, or the greatest possible being.³

I will argue that proponents of standard ontological arguments must face various vexed issues resulting from the assumption of objective value before the arguments themselves can gain traction.

In §2, I present a challenge to the value commensurability assumption to which proponents of standard ontological arguments are committed. I argue that, while friends of the ontological argument can meet the challenge, they must do so at a considerable cost to the cogency of their argument. §3 warns about the threat of the indefinite extensibility of greatness to the coherence of the concept of the greatest possible being. §4 shows the difficulties that the ontological arguer faces in securing the uniqueness of the greatest possible being. §5 challenges proponents to provide a well-motivated bridge principle that links value and existence, and allows them to deduce the actual existence of the greatest possible being. §6 argues that proponents of the argument face a dilemma: either they abandon their argument and its underlying objective value assumption, or they allow the problem of evil to dangerously threaten their conclusion. §7 intends to show that standard ontological arguments are not worth their price for the theist. To advance such arguments, theists weaken their overall worldview by commitments that could be avoided and that are made only to threaten theistic belief by the resulting evil-related problems. §8 concludes the paper.

³ In what follows, 'standard ontological arguments' refer to ontological arguments that start from a concept of God based on some objective scale of value.

2. Value commensurability

Anselmian, Cartesian, and standard modal ontological arguments have at their foundation a notion of objective value that permits an objective ranking of beings according to their overall value. It is usually assumed that there are several great-making properties that determine the overall comparative value or greatness of beings. For instance, it is widely held by proponents of ontological arguments that power, knowledge, and moral goodness are among these properties and that all of these attributes matter in determining how the different beings are ranked by overall value.⁴

The ontological arguer must then assume that the rankings according to each of the great-making properties can be combined in an objective ranking of all beings by overall greatness. Can there be such an objective aggregated ranking by overall greatness? The existence of such a universal objective ranking by overall greatness has been doubted by several philosophers. For instance, Morris (1987) doubted whether an aardvark and an escalator can be compared by overall greatness. Purported instances of value incommensurability cast doubt on the existence of such an objective ranking. This doubt is based on intuitions that can be denied by friends of the ontological argument. However, Morris's concern can be justified on principled grounds that transcend mere subjective intuitions.

Those grounds can be provided after determining the properties that the considered aggregated ranking must have in order to serve its purpose according to general assumptions shared by proponents of standard ontological arguments. The first condition that the aggregated ranking must have is that of independence of irrelevant alternatives.

⁴ Given that a non-question begging ontological argument requires God to be conceived as the greatest *possible* being and not only as the greatest *actual* being, the considered domain of beings includes all actual and merely possible beings.

This condition means that the aggregated ranking of beings *a* and *b* is only determined by how *a* and *b* are ranked in terms of the different great-making properties, independently of how *a* and *b* are ranked in comparison with other beings.

Abandoning this condition would bar us from forming any reliable judgements about the comparative greatness of beings. Even if we were able to reliably compare the standing of beings *a* and *b* in terms of each great-making property, we would not be in a position to reach a justified conclusion regarding the ranking of these beings by overall greatness. For this ranking would not only depend on the comparison of the extent to which each of *a* and *b* possesses great-making properties, but also on how they fare in comparison with all other possible beings. Forming a justified judgment about the comparative greatness of beings would then be an intractable task. Given that proponents assume, and want to convince us, that we can form reliable judgments about the comparative greatness of beings (at least when one such being is God), the independence of irrelevant alternatives condition is needed to make certain judgements about the comparative greatness of beings possible with our limited cognitive faculties.

The second property that the aggregated ranking must have is unanimity. If being *a* is ranked more highly than being *b* for each great-making property, the aggregated ranking must place *a* higher in the scale of overall greatness. If all great-making properties unanimously favour *a* over *b*, then *a* is greater than *b*. The ontological arguer needs the unanimity condition to ensure that there is no being that is ranked higher than the greatest possible being regarding every great-making property. Allowing for such a possibility amounts to disconnecting the concepts of God, as traditionally conceived, and that of the greatest possible being, thus rendering the ontological argument theologically insignificant.

The third condition for the aggregated ranking is that of non-dictatorship. There must not be a single great-making property whose ranking of beings completely determines the aggregated ranking. Were this the case, the other great-making properties would be irrelevant for overall greatness. This contradicts the starting assumption that there are multiple great-making properties that all matter in determining the overall greatness of beings.

Given how I named these three conditions that must be satisfied by any acceptable aggregated ranking by overall greatness, you may have already guessed where I am heading. In his famous impossibility theorem, Arrow (1950) showed that there is no aggregated ordering of the kind under consideration that satisfies the conditions of unanimity, independence of irrelevant alternatives, and non-dictatorship, while delivering an aggregated ranking for all possible combinations of individual rankings according to each of the great-making properties.

The implication of Arrow's theorem is that there are logically possible profiles of rankings for the different great-making properties that make some beings impossible to rank by overall greatness. The assumption of universal value commensurability according to which any two beings can be ranked by overall greatness is therefore threatened.⁵ This assumption of universal value commensurability is the foundation for what Nagasawa (2013, 2017) termed the Linear Model, according to which God is the greatest possible being in virtue of occupying the highest position in a great chain of being, where all beings (without exception) are ranked by overall greatness. If there are beings that cannot be ranked by overall greatness, there is no great chain of being and the Linear Model is invalidated.

⁵ The term 'universal value commensurability' is from Morris (1987).

At this point, a proponent may respond by saying that, while the logical space includes profiles of rankings by great-making properties that make some beings incomparable by overall greatness, the space of metaphysical possibility is a restriction of the logical space that is free from such problematic ranking profiles. After all, for the purposes of the ontological argument, it is the space of metaphysical, rather than logical, possibility that is relevant.

While this may be true, it is of no help in strengthening the case for the soundness of the ontological argument. Given how little we know about the space of metaphysical possibility, opponents of the ontological argument need not accept that this space is nicely structured to guarantee universal value commensurability. They would be well within their rights to suspend judgment on the matter, waiting for proponents to supply good reasons for holding that the space of metaphysical possibility is indeed free from cases of value incommensurability.

Friends of the ontological argument are not without resources to meet Arrow's challenge. Indeed, they do not necessarily need the assumption of universal value commensurability to maintain that God is the greatest possible being. They only need God to be value commensurable with every other being, while allowing for the possibility that other non-divine beings might be value incommensurable. God can be value commensurable with, and greater than, any other being if God is the top-ranked being in every great-making property. This is what Nagasawa (2013, 2017) called the Comprehensive Greatness View.

The Comprehensive Greatness View is threatened by the notion that it would be impossible for the same being to be top-ranked in every great-making property. If we restrict our attention to power, knowledge, and moral goodness, it would seem that the first two go

nicely hand in hand, making it plausible to suppose that there is no *prima facie* impossibility for the same being to be the most powerful and knowledgeable possible being. This has its justification in the fact that limitations in knowledge entail limitations in power. If a being lacks some knowledge, there are actions that it cannot perform. This supports the conclusion that a being with unlimited power must have unlimited knowledge.⁶

However, matters differ when moral goodness is considered in combination with power and knowledge. Several problems arise when moral goodness is supposed to be based on objective standards that are independent from God. For instance, it could be argued that the most morally perfect being – assuming there is one – cannot perform morally blameworthy actions. This means that such a being must fall short of omnipotence. This opens the door to the possibility that there are beings more powerful than the most morally perfect being, meaning that the top-ranked being in moral goodness would not be top-ranked in terms of power. If this is so, no being could be top-ranked in every great-making property. This leaves open the question of whether there is a being that is value commensurable with all other beings, as required by the Comprehensive Greatness View. As pointed out by Nagasawa (2013, 2017), this objection to the Comprehensive Greatness View is not conclusive. The classical arguments that purport to show an inconsistency between the classical divine attributes of omnipotence, omniscience, and omnibenevolence can be disputed. However, it remains true that friends of the ontological argument would be better off in finding another alternative to the Comprehensive Greatness View to rescue God's standing as the greatest possible being.

⁶ The compatibility between perfect power and perfect knowledge might be doubted. I am happy to grant this compatibility for the sake of argument.

The needed alternative comes for an escape route from Arrow's impossibility result that I have not yet considered. Sen's (1970) results, applied to the ranking by overall greatness, show that under two assumptions about the individual rankings of each great-making property, Arrow's impossibility theorem no longer applies or poses a threat to universal value commensurability and its related Linear Model. These two assumptions are the following.

Numerical Degrees: for each great-making property G , there is an objective numerical scale that assigns to each being b a numerical value that corresponds to the degree of G 's exemplification by b .

Exchange Rates: for any great-making properties G and H , there is an objectively-fixed exchange rate that determines the degree d of G that a degree e of H is worth.

Under these assumptions, it is possible to compute the overall greatness of each being as a numerical value. This ensures that the overall greatness of every two beings can be compared, thus guaranteeing universal value commensurability.

While not considering the implications of Arrow's theorem, Nagasawa (2013, 2017) took a similar route to rescue the Linear Model according to which God occupies the highest position in the great chain of being, where all beings are ranked according to overall greatness. The advantage that Nagasawa sees in the Linear Model is that it is not vulnerable to the notion that there cannot be one being that is top-ranked in every great-making property. All that is needed for the Linear Model is that God has the maximum overall greatness regardless of whether He has each great-making property to its highest possible degree.

The price for saving the Linear Model is endorsing the Numerical Degrees and Exchange Rates assumptions. In the absence of independent arguments to justify these substantial propositions about objective value, nothing forces the opponents of the ontological arguments to recognise them as viable options for the ontological arguer.

The foregoing discussion supports the conclusion that there are serious challenges that proponents of standard ontological arguments must overcome to justify the existence of an objective ranking by overall greatness whose top position is occupied by God. Otherwise, standard ontological arguments falter before they begin.

3. Indefinite extensibility of greatness

We saw in the previous section that there are two available alternatives for proponents of standard ontological arguments to disambiguate the claim that God is the greatest possible being. The first is the Comprehensive Greatness View, according to which God is a top-ranked being in each great-making property. The second, the Linear Model, wherein God is the being which has the maximum overall greatness, with the Numerical Degrees and Exchange Rates assumptions ensuring that all beings are value commensurable and can be ranked by overall greatness in a great chain of being.

Now that we have two definite readings of the concept of the greatest possible being, the coherence of this concept can be investigated. If the concept is incoherent, ontological arguments based on this concept can be swiftly refuted.

It is not uncommon to think that being the greatest possible being entails omnipotence, omniscience, and omnibenevolence. Some of those who share this intuition have tried to argue for the incoherence of the concept of the greatest possible being on the grounds that one of these three omni-properties is incoherent. Whitcomb (2012) provided an example for

an argument to the effect that omniscience is incoherent and that, therefore, there is no greatest possible being. Whitcomb used the trendy notion of grounding to argue that the fact that there is an omniscient being must be self-grounded. Given that grounding is widely taken to be irreflexive, Whitcomb concluded omniscience to be incoherent.

Even granting Whitcomb's conclusion, friends of the ontological argument need not worry. As Todd (2015) explained: 'If the having of a property is impossible, then it is not required of the greatest possible being that she has that property. Being the greatest possible being – being perfect – does not entail being anything impossible. It's as simple as that.' (Todd, 2015, p. 536). Indeed, the coherence of the omni-properties is irrelevant to the question of whether the scales of the great-making properties are bounded. The coherence of the concept requires only that it is logically possible for a being to be unsurpassed in greatness by any other being.

If we consider the Comprehensive Greatness View, the greatest possible being is top-ranked in each great-making property. As discussed in the previous section, this view can be challenged on the grounds that there could not be one such top-ranked being. Indeed, it could be that achieving the highest rank of a great-making property necessitates lowering one's rank in others. This was assuming that the scales of all great-making properties have an upper bound. Why should we suppose this? In the absence of good reasons to hold that the scales of all great-making properties have upper bounds, or to maintain that the default position is the assumption that said scales are indeed appropriately bounded, opponents of standard ontological arguments are well within their rights to require such good reasons before engaging with arguments that purport to show that the greatest possible being, according to the Comprehensive Greatness View, exists. The Comprehensive Greatness View

seems fragile given that it suffices that the scale of one great-making property lacks an upper-bound to make the view incoherent.

The Linear Model does better in this respect. Even if there are some great-making properties with unbounded scales, overall greatness might have an upper bound. For example, it might be the case that the contribution to overall greatness of great-making properties, whose scales are unbounded, is bounded. It could be that the knowledge of beings whose knowledge exceeds a certain finite degree contributes the same amount to their overall greatness even if knowledge does not have a maximum degree. The same could apply to other great-making properties, if any, whose scales are unbounded. It could also be the case that, while some great-making properties have unbounded scales, there is a maximum to the overall greatness that can be achieved by the same being's joint exemplification of great-making properties.

Be that as it may, overall greatness might be indefinitely extensible such that, for every possible being, there are greater possible beings. This worry has been expressed by Oppy (2011), who might be taken to warn that, in the absence of good reasons to think otherwise, there is no guarantee that there is a maximal degree of overall greatness and, therefore, no guarantee that the Linear Model and its notion of the greatest possible being are coherent. Bohn (2012) concurred, offering the only explicit argument for the indefinite extensibility of greatness that I am aware of.

Bohn built on Shapiro and Wright (2006) to hold that a concept *C* is indefinitely extensible if there is an injection of the ordinal numbers into its extension. He then argued that such an injection exists. Below is Bohn's argument for the indefinite extensibility of greatness from the indefinite extensibility of knowledge:

There seems to be a short way to the conclusion that perfection is indeed thus indefinitely extensible. *All else being equal*, if x knows more mathematics than y, then x is more perfect than y. The ‘all else being equal’-clause is important here. I don’t consider a good mathematician an overall more perfect being than myself just because she knows more mathematics than I do. But *if all else is equal between us*, then I am indeed forced to conclude that she is more perfect than I am. But if the ordinal numbers are indefinitely extensible, then knowing mathematics is indefinitely extensible. And if it is impossible to know about all the ordinal numbers in virtue of them being indefinitely extensible, then it is impossible to know all mathematics in virtue of it being indefinitely extensible. But then it is clear that for each x that we suppose is perfect, there is a y such that all else is equal, but y knows more mathematics and hence is more perfect than x. So, perfection is indefinitely extensible. (Bohn, 2012, p. 678, emphasis in the original)

Here, Bohn is highlighting that he is not merely claiming that greatness is indefinitely extensible given the indefinite extensibility of knowledge, but rather that, for each degree of overall greatness, there is a higher degree of overall greatness achieved by more mathematical knowledge, while all else is kept equal. If this is so, there is no maximal degree of overall greatness and the notion of the greatest possible being is incoherent.

It is, of course, open to proponents to dispute Bohn’s conclusion. They might hold, as acknowledged by Bohn, that indefinite extensibility is an incoherent notion. They might also dispute his assumption that mathematical knowledge requires the possession of beliefs about each mathematical object. It could thus be claimed that there is no more knowledge about the ordinals than knowledge of their concept.⁷

⁷ Bohn (2012) provides similar arguments for the indefinite extensibility of greatness from the indefinite extensibility of other great-making properties. These arguments can be subject to responses similar to those outlined regarding his argument from the indefinite extensibility of knowledge.

However, the possibility remains that, if the greatest possible being possesses the traditional omni-properties (given that they may be incoherent), there is no firm ground to rule out the indefinite extensibility of greatness and the resulting incoherence of the foundational concept of standard ontological arguments. Proponents may assume that the concept of the greatest possible being is coherent. Thus, their opponents could reasonably remain sceptical.

4. Uniqueness

Setting aside worries about the coherence of the concept of the greatest possible being, proponents of standard ontological arguments must still face an additional concern: the uniqueness of the greatest possible being.

Standard ontological arguments have their roots in PBT, according to which God is ‘that than which no greater can be conceived’. These arguments intend to show that one being, God, is actually the greatest possible. Yet why should we think that, if there is indeed a greatest possible being, there should only be one? Would it not be possible for there to be multiple beings that are equally great and that no possible being is greater?

To assess the resources available to friends of standard ontological arguments to motivate the uniqueness of the greatest possible being, let us again consider the two disambiguations of the concept of the greatest possible being introduced in §2, namely the Comprehensive Greatness View and the Linear Model.

According to the Comprehensive Greatness View, a greatest possible being is top-ranked in each great-making property. *Prima facie*, nothing in this definition prevents multiple beings from reaching this criterion. The uniqueness of the greatest possible being can be

guaranteed under the Comprehensive Greatness View if there is at least one great-making property with an upper bound that cannot be instantiated by more than one being.

If we restrict our attention to power, knowledge, and moral goodness, there seem to be no good reasons to think that, even if omniscience and omnibenevolence are possibly co-instantiated, there could not be more than one omniscient and omnibenevolent being.

When it comes to power, there are some conceptions of omnipotence that guarantee that there cannot be more than one omnipotent being. For instance, Pearce and Pruss (2012) defined an omnipotent being as one whose will is perfectly free and efficacious. There are no constraints on what an omnipotent being can will, and whatever is willed by an omnipotent being happens.⁸

The supposition that there is more than one omnipotent being on the conception of Pearce and Pruss leads to contradiction. If we suppose there to be more than one omnipotent being, their wills could conflict given that there are no constraints on the will of an omnipotent being. If such conflicts arise, what would occur would be, at most, what one of these omnipotent beings willed. The wills of some, or even all of, the omnipotent beings would have been inefficacious. This contradicts the perfect efficacy of an omnipotent being's will.⁹

An adherent of the Comprehensive Greatness View can then justify the uniqueness of the greatest possible being by holding that such a being has to be omnipotent according to Pearce and Pruss's conception. However, given the absence of constraints, it seems that such a being can will evil states of affairs to arise. How benevolent could such a being be? The

⁸ It should be highlighted that a perfectly free being is not subject to irrational influences. As such, a perfectly free being wills only what is rational and cannot will an impossible state of affairs to arise.

⁹ See Mele and Smith (1988) and Wielenberg (2001) for interesting discussions of the potential competition of multiple omnipotent beings.

same worry raised against the Comprehensive Greatness View in §2 rears its ugly head again.

Let us now see how the Linear Model fares in justifying the uniqueness of the greatest possible being. On the Linear Model, the greatest possible being is that with maximum overall greatness. Again, nothing in the Linear Model necessarily precludes that the maximum overall greatness can be achieved by multiple beings.

If there is a property necessary to achieving the maximum overall greatness that cannot be possessed by more than one being, the Linear Model can secure the uniqueness of the greatest possible being. However, it is difficult to see on independent grounds that such a condition must hold for overall greatness. Overall greatness in the context of the Linear Model is so obscure for our cognitive faculties that we lack a firm ground for any substantive judgements regarding it.

Alternatively, a friend of the Linear Model can claim that, in the great chain of being, there are no beings with an equal overall greatness. For every two beings x and y , either x is strictly greater than y , or vice versa. This would guarantee that there cannot be more than one being at the top of the great chain. Again, opponents seem justified in their requirement of good reasons to defend the claim that there are no ties in overall greatness.

It is worth remembering at this point that the main advantage of the Linear Model, as pointed out by Nagasawa (2013, 2017), is that it neutralises the concerns raised against the Comprehensive Greatness View regarding the possibility that the same being has all great-making properties, as well as the possibility that the same being is top-ranked in each great-making property. As such, the Linear Model is compatible with the possibility that the greatest possible being falls short of omnipotence, omniscience, and omnibenevolence.

Nagasawa advocated for adopting the Maximal God thesis, according to which God is the greatest possible being in virtue of having the maximal coherent combination of power, knowledge, and moral goodness. In so doing, the Maximal God thesis avoids the issues related to the coherence of the traditional omni-properties and their mutual compatibility. The price to pay for escaping these vexed issues is a leap into the unknown. Why should we suppose that there is a unique weakening of the traditional omni-properties that achieves the maximal coherent combination of power, knowledge, and moral goodness? Even if there were such a weakening, why should we suppose that it could not be instantiated by more than one being?

In sum, while the Comprehensive Greatness View seems better equipped at guaranteeing the uniqueness of the greatest possible being, the Linear Model stands on shakier ground. We have seen, however, that the Comprehensive Greatness View is more troubled by the threat of the indefinite extensibility of greatness than the Linear Model. It seems then that different considerations related to the validity and soundness of standard ontological arguments pull in different directions regarding the choice of the best disambiguation of the concept of the greatest possible being. Neither the Comprehensive Greatness View nor the Linear Model seem able to avoid all of the difficulties discussed thus far.

5. Greatness and existence

Setting aside the issues raised in the previous sections and granting the coherence of the notion of the greatest possible being, we turn now to examining the plausibility of the ontological argument's move from the concept of the greatest possible being to its actual existence.

To complete this move, the ontological arguer needs a bridge principle that links greatness and existence. Such a principle could be that existence itself is a great-making property. Existence, granting that it is a first-order property, is an all-or-nothing matter. This makes existence different from the other degreed great-making properties that we have thus far considered, but it does not by itself rule out the great-making character of existence. That said, one might wonder why existence should be considered a great-making property at all. *Prima facie*, existence seems to be neutral and does not have an apparent great-making character. Proponents could reply that existence is a necessary condition for possessing any further properties, including great-making ones. They can then move on to claim that any necessary condition for having a great-making property is itself a great-making property. If this is granted, existence can indeed be a great-making property.

However, granting this much is still insufficient for the purposes of the ontological argument. Indeed, the ontological arguer not only wishes to show that the greatest possible being is merely possible, but that it actually exists in the real world. While holding that existence as such is a great-making property seems to be justifiable on some objective grounds, it is less certain to claim that it is existence in the actual world that confers the great-making character on its bearers. Insistence that only actual beings exist and can therefore have great-making properties falls somewhat short as it would render the ontological argument plainly question-begging. The greatest possible being is, by definition, a being that has great-making properties. If great-making properties can only be had by actual beings, then the greatest possible being is, by definition, an actual being. Who would be convinced by an ontological argument that explicitly includes actual existence in the concept of God?

While this discussion is most relevant to the Anselmian and Cartesian arguments, friends of the more recent modal ontological arguments can circumvent the discussed issues by claiming that it is necessary existence – that is, existence in all possible worlds – that is a great-making property. If this is granted, the Comprehensive Greatness View guarantees that a top-ranked being would be a necessary being. In other words, the Comprehensive Greatness View yields the conclusion that God exists necessarily if He exists at all.

However, matters are not so clear regarding the Linear Model. Why should we suppose that the being at the top of the great chain is one whose existence is necessary if possible? Our interest here is in the Linear Model where God is not assumed to have the traditional omni-properties as, if they are assumed, we must fall back to the Comprehensive Greatness View. Our interest is then in Nagasawa's Maximal God thesis that does not entail that God has the traditional omni-properties.

Kvanvig (forthcoming) suitably diagnosed the problem facing the Maximal God thesis in proposing the claim that the greatest possible being exists of necessity if its existence is possible. Kvanvig noted that the Maximal God thesis can be of use in an ontological argument if its construction moves in the following two steps:

The first step is to find a collection of properties that are guaranteed to be metaphysically coherent, and the second step is to hope the ship can still hold water when we add to this collection the further property of being necessary if possible.

(Kvanvig, forthcoming, p. 9)

For Kvanvig, the first collection of coherent properties is the maximal coherent combination of knowledge, power, and benevolence. Let us call this collection Maximal Coherent Greatness (MCG). Kvanvig asks for a reason to justify that the combination of MCG with the

further property of being necessary if possible is still coherent, granting that this coherence guarantees metaphysical possibility – the latter being a claim that is far from indisputable.

The ontological arguer cannot simply assume that supplementing a collection of coherent properties with a further coherent property would always yield a new coherent collection. Indeed, if this were the case, an ontological argument based on this principle would fall prey to all manner of parodies. One could take any coherent (and hence possibly exemplified essence) on the ontological arguer's assumption that coherence guarantees metaphysical possibility, and add to this essence the property of being necessary if possible to build an argument to the effect that something with the said essence exists of necessity and, therefore, exists in the actual world.

Based on the Maximal God thesis, can a friend of the ontological argument argue that there are some principled grounds for maintaining that MCG is the only coherent collection of properties to which the property of being necessary if possible can legitimately be added, yielding a new coherent collection? This would seem somewhat doubtful.

The ontological arguer can insist that the property of being necessary if possible is a great-making property and therefore a property of the greatest possible being. This move, regardless of its plausibility, is not open to a defender of the Maximal God thesis. This is because the Maximal God thesis, to neutralise various arguments against the existence of God, distances itself from the requirement that the greatest possible being must have all great-making properties. Simply pointing out the great-making character of the property of being necessary if possible does not therefore guarantee its possession by the greatest possible being.

Moreover, the weakening procedure that moves from the traditional concept of God as having the omni-properties to the Maximal God thesis does not guarantee, for all we know, that the property of being necessary if possible is not one that must be abandoned in order to achieve the maximal coherent combination of knowledge, power, and benevolence.

In summary, the bridge principle needed by the ontological argument to move from the concept of God to His actual existence is easier to motivate for modal ontological arguments than for Anselmian and Cartesian ones. For the modal ontological argument, the Comprehensive Greatness View is better equipped to justify the claim that God's existence is necessary if possible. In contrast, the Linear Model under the Maximal God thesis seems to be unable to motivate this claim that is necessary for the success of the modal ontological argument.

6. Moral challenges

This section considers a difficulty that indirectly impacts the status of standard ontological arguments as valuable components of a case for the existence of God. This difficulty stems from this class of arguments' reliance on a realm of objective values that are independent from God.

As previously mentioned, the notion of greatness at the foundation of standard ontological arguments must be independent from God. Otherwise, it cannot be relied upon to formulate a concept of God from which His existence can be deduced. The reasoning of the ontological argument would be plainly circular in that case.

What holds for greatness in general holds for moral goodness in particular. Friends of standard ontological arguments are usually committed to the claim that the greatest possible being, whose existence is the conclusion of their argument, is morally good to the

utmost degree, or indeed, omnibenevolent. Here again, the moral standards according to which God is ranked very highly in the scale of moral goodness cannot be taken by the ontological arguer to depend on God. Once this has been acknowledged, the problem of evil immediately presents itself.

The problem of evil is generally considered as the most forceful argument against the existence of God. The problem comes in two varieties: logical and evidential. The former purports to establish that there is a logical contradiction between the existence of God and the existence of evil. Given that evil exists in the world, the logical problem of evil concludes that God does not exist. The latter uses the existence of evil to provide strong evidence against the existence of God. The evidential problem of evil has several flavours. Some operate at a high level of abstraction which does not require specific features of the considered evils to come into play. Other versions of the evidential variety are more specific in that they single out specific evils whose occurrence can lower, to a great extent, the probability of God's existence.

For definiteness, let us consider the following evidential problem of evil as suggested in Tooley (2019).

1. There exist states of affairs in which animals die agonizing deaths in forest fires, or where children undergo lingering suffering and eventual death due to cancer, and that (a) are intrinsically bad or undesirable, and (b) are such that any omnipotent person has the power to prevent them without thereby either allowing an equal or greater evil, or preventing an equal or greater good.
2. For any state of affairs (that is actual), the existence of that state of affairs is not prevented by anyone.

3. For any state of affairs, and any person, if the state of affairs is intrinsically bad, and the person has the power to prevent that state of affairs without thereby either allowing an equal or greater evil, or preventing an equal or greater good, but does not do so, then that person is not both omniscient and morally perfect.

Therefore, from (1), (2), and (3):

4. There is no omnipotent, omniscient, and morally perfect person.
5. If God exists, then he is an omnipotent, omniscient, and morally perfect person.

Therefore:

God does not exist. (Tooley, 2019).

As per Tooley, the problem of evil is most threatening to theism when formulated in deontological terms. The deontological formulation focuses on the rightness and wrongness of actions instead of axiological considerations that require a bridge principle to connect the goodness or badness of the considered states of affairs and the rightness or wrongness of causing or not preventing them. Tooley's argument can then be understood in deontological terms.

For our current purposes, premise (5) deserves immediate attention.¹⁰ The premise ascribes to God the traditional omni-properties that are not, as we have already seen, necessarily entailed by the starting point of the ontological arguments under consideration, namely that God is the greatest possible being. The premise can be weakened to require much less knowledge and goodness from a being who deserves the name God. For knowledge, a limited amount (e.g., that of humans) is sufficient for knowing of the considered instances of

¹⁰ Clause (b) of premise (1) can also be challenged by the theist. The existence of possible avenues to challenge this clause does not speak against my conclusion regarding the fate of the considered class of ontological arguments.

evil. It also seems reasonable to suppose that an amount of goodness that is far less than omnibenevolence would be sufficient to motivate its possessor to prevent these instances of evil. Regarding power, it is unclear how much is needed to prevent the considered instances of evil without allowing equal or greater evils, and without preventing equal or greater goods.¹¹

If we return to Nagasawa's two disambiguations of the notion of the greatest possible being, the Comprehensive Greatness View appears more troubled by this version of the problem of evil. This is because if a degree of power that is sufficient to prevent the considered evils is possibly instantiated, it follows that the greatest possible being (that is top-ranked in terms of power, knowledge, and goodness) would have to prevent the considered evils. Given that these evils are not prevented, the probability of the existence of the greatest possible being is lowered, perhaps significantly.

The Linear Model seems more able to resist the considered problem of evil, but at the price of conceding that God could be extremely ignorant, morally bad, or much weaker than believed. This is, to say the least, not a very tempting alternative for the ontological arguer.

Basing one's ontological argument on a notion of objective value seems then to lead to a dilemma. For the ontological argument to succeed and avoid the charge of circularity, it allows the most significant threat to theistic belief emerge and threaten the conclusion that the ontological arguer tries to establish. For if the deontological standards at the foundation of the problem of evil are dependent on God's will or commands, there would be serious avenues to dissolve the problem of evil, as forcefully argued by Brown (1963, 1967, 1968). If those standards are independent of God, the problem of evil must be faced.

¹¹ In what follows, I omit the qualification 'without allowing equal or greater evils and without preventing equal or greater goods' to simplify my expression.

To present an ontological argument based on objective values that are independent of God, one must then permit the problem of evil to challenge belief in God. One has also to concede that, even if such an ontological argument were successful, it would be insufficient for proving that God, as traditionally conceived, exists. This runs counter to the self-contained and sufficient spirit of the ontological argument that moves from the concept of God to the conclusion that God exists. Friends of the ontological argument ought then to refrain from basing their concept of God on a notion of objective value that is independent of Him. Otherwise, I fear that they would be cutting the branch they are sitting upon.

7. Theoretical virtues

The foregoing discussion is based on the assumption that there are good grounds to suppose that there is an objective scale of greatness that is suitable for the purposes of standard ontological arguments. Without this assumption, an ontological argument based on the concept of the greatest possible being is simply a non-starter. In this section, I discuss some of the threats to the assumption of objective values, that are independent of God, and the impact of these threats on the value of standard ontological arguments for the case for theism.

When considering the question of objective values, three options can be considered regarding their ontological status:

- a. Eliminativism: there are no objective values.
- b. Reductionism: there are objective values that are reducible to, or supervene on, other (non-evaluative) entities.
- c. Primitivism: there are primitive and fundamental objective values that are not reducible to, and do not supervene on, anything else.

On eliminativism, objective values are denied their reality as supposed by the ontological arguer. Accordingly, eliminativism is not an option for friends of traditional ontological arguments.

Regarding reductionism, one of the most plausible candidates for reduction or subvenience base of objective values are physical properties. If objective values supervene on physical properties, it follows that beings that possess objective value must be physical objects or possess physical properties at the very least. In this case, the greatest possible being, assuming there is one, would be a physical object, or perhaps a compound of a physical object and a non-physical mind. This is, to say the least, very far from the greatest possible being whose existence is the conclusion of traditional ontological arguments. Under reductionism, the greatest possible being might be, for all we know, a human being. Reductionism cuts the link between the conclusion of standard ontological arguments and their intended theological significance. Reductionism is therefore not a viable option for friends of standard ontological arguments whose aim is to argue for the existence of a being worthy of the name God.

It thus seems justified to conclude that standard ontological arguments must presuppose primitivism about greatness in order for their ideas to gain traction and retain their theological significance. This, I argue, is a cost in itself for the ontological arguer. It is a theoretical cost that must be balanced by other gains in theoretical virtue on pain of a serious weakening of the argumentative force of the ontological argument.

Why is primitivism a cost for the ontological arguer? The reason lies in its being more complex than eliminativism and reductionism. Other things being equal, eliminativism or reductionism ought to be preferred to primitivism as it introduces independent and

fundamental objective values that are absent from the ontologies of both of its competing views.

The only way for primitivism to surpass its competitors is to offer a far better explanation for the seeming objectivity and autonomy of some of our common value judgments, especially when it comes to morality. Defending the superiority of primitivism from an explanatory perspective is a major and difficult task that ontological arguers have to undertake before submitting their arguments to the evaluation of critics.

To highlight the difficulty of the ontological arguer's task, let us consider a form of eliminativism according to which the divine will is constitutive of value. Following Quinn (1990), let us call this eliminativist theory Theological Voluntarism (TV). TV is a theistic competitor to primitivism, under which values are subjectively and freely defined by God. The source of value on TV is the divine will.

TV affords an explanation for the sense of objectivity that many of us find in some of our value judgments and, especially, in our moral ones. A proponent of TV can claim that God created us with an innate sense of objective value whose deliverances are aligned in important respects with what values were constituted by the divine will.

The ontological arguer is normally a theist who accepts the existence of God and the freedom of the divine will. TV denies an absolute objectivity of value but has an available explanation, whose ingredients are accepted by the ontological arguer, of the seeming value objectivity with which many of us are acquainted. As we saw in the previous section, TV arguably has the resources to neutralise the problem of evil, whose threat to theistic belief rests on an autonomist view of moral value. Friends of standard ontological arguments must argue that primitivism affords a much better explanation of our sense of objective value

than that of TV. The claimed explanatory advantage of primitivism has to be such that it outweighs the parsimony advantage that TV has over primitivism and justifies the high cost of allowing the emergence of the problem of evil.

That said, I do not claim that the ontological arguer cannot succeed in defending primitivism in the required way. I am highlighting the difficulty of the task and questioning whether such a defence is worthwhile from a theistic perspective. Are there not other theistic arguments that one can advance without paying the high costs needed to rescue standard ontological arguments? It seems to me that an affirmative answer is most plausible. If I am right, standard ontological arguments are not worth their price for theists.

8. Conclusion

This paper has argued that standard ontological arguments' path to success is fraught by difficulties that stem from the foundational assumption of objective value that the concept of the greatest possible being presupposes. Proponents must first address these difficulties before their arguments qualify for discussion by opponents.

I take the lesson of the present discussion to be that theists seeking to pursue the project of the ontological argument are well advised to find another concept of God, that does not rely on a notion of objective value, on which to base their arguments. The task is naturally challenging given the convergence of the main historical and contemporary figures who championed the ontological argument to relying on a concept that has objective value at its foundation. However, I propose that the prospects of developing ontological arguments based on alternative concepts of God and that deserve serious attention are not dim. While I have an interesting concept in mind, I will leave it for another occasion.¹²

¹² This other occasion presents itself in Paper 5.

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Paper 2

Causal Fundamentality

1. Introduction

Recent metaphysics has seen a growing interest in the question of fundamentality. As Bliss observes, “It is without question the prevailing view amongst contemporary analytic metaphysicians that there is something fundamental.” (Bliss 2019, p. 361). Fundamentality in the recent literature is intimately linked to the notions of grounding and ontological dependence that are usually taken as explanatory relations (Tahko 2018). Grounding, for example, is widely believed to play an explanatory role. Fine writes, “We take ground to be an explanatory relation: if the truth that *P* is grounded in other truths, then they account for its truth; *P*'s being the case holds in virtue of the other truths' being the case.” (Fine 2001, p. 15).

The general idea behind the interest in fundamentality is that if reality, ordered by a certain explanatory relation, has a fundamental level, it is then possible to give, at least, a partial explanation of the existence of any given being, which would consist of a finite explanatory chain ending at something fundamental.¹³

The question that I would like to investigate is that of the existence of causally fundamental concrete beings whose existence does not have a causal explanation. This is an older question which is intimately related to that of worldview choice which is, arguably, one of the objectives of any systematic and complete metaphysical theory. For example, classical

¹³ If the explanatory relation in question is well-founded in the sense that there are no infinite explanatory chains, it should then be possible to give a *complete* explanation of the existence of derivative beings in terms of finite explanatory chains that end with something fundamental.

theistic worldviews position a concrete being, God, at the root of the causal order meaning that God is fundamental in terms of the causal relation. If it turns out that there is no ultimate cause, classical theism would be refuted.

A second motivation to choose causality as an explanatory relation of our investigation is to exclude the realm of abstract objects from the explanatory scope given that it is dubious that such objects can be said to exist or to be real in the ordinary sense of the term. It seems safe to deny that abstract objects have causal powers or can be related to the causal relation.¹⁴ Setting abstracta aside, causation seems to be a legitimate explanatory relation to frame the question of fundamentality when the subject of enquiry is the world of our experience. Even if there are abstract beings, answering the question of the existence of ultimate concrete causes would still be an interesting task. Furthermore, on the supposition that abstract beings exist and that their existence is dependent on that of concrete beings, from which they are abstracted (Lowe 2013), fundamental concrete beings, if there are any, would be fundamental *tout court*.

A third motivation to think in terms of causality is that grounding, ontological dependence and causality seem to share much in common when it comes to their formal properties. If one agrees with Wilson that grounding is a type of causation (Wilson 2018), there seems to be reasonable prospects that the results of reasoning in terms of causation between concrete beings could be generalized to answer the question of fundamentality when the explanatory relation is grounding.

¹⁴ Those who think that some abstract objects have causal powers can understand me as defining concrete objects as those that can enter into causal relations and abstract objects as those that are not concrete.

In what follows, I will argue that there are causally fundamental (uncaused) beings that are causal explanations of the existence of all other non-fundamental (caused) beings.¹⁵ §2 is dedicated to an outline of the notion of causality that will be used along with the account of modality on which the argument relies. §3 and §4 are dedicated to the exposition of the argument and to a defence of its premises. §5 addresses an important objection to the introduced modal account and §6 concludes by highlighting the merits of the presented argument.

2. Causation and modality

The notion of causality that is of interest to my argument is that of efficient causation. An efficient cause x of a given effect y can be said to be responsible for y 's existence through exercising a certain causal power that it has. We can define efficient causation as follows:

Efficient causation: x is an efficient cause of another being y i.e. x causes y if and only if y 's existence depends on x 's exercise of a certain power that it has.

The relata of the causal relation are concrete beings. This is different from the standard view according to which the relata of the causal relation are events (Lewis 1986). While there seems to be a natural way to modify my definition of efficient causation by identifying as effects events consisting in the entry into existence of concrete beings and causes as the events consisting in the exercise of a certain causal power by other beings, I prefer to maintain my definition given that the notion of a being causing another being's existence seems perfectly coherent and that no gain in clarity or rigor is being achieved, for our current purposes, by introducing events explicitly in our framework. Moreover, my aim is to

¹⁵ It is worth noting that the conclusion of my argument does not rule out the existence of infinite causal regresses.

argue that there are causally fundamental beings that are causes of all other non-fundamental beings and not that there are causally fundamental events.

As is usually held in the metaphysics of causation, I assume that there is a counterfactual dependence between an effect's existence and it being efficiently caused by some being or other. This counterfactual dependence can be interpreted for our purposes as meaning that were an effect not caused to exist, it would not exist.

My definition of efficient causation embeds an irreflexivity condition. No being can be its own efficient cause. This seems to be beyond reproach if one acknowledges that existence is a pre-requisite for causal activity.

In addition to irreflexivity, it follows from my definition above that efficient causation is transitive and asymmetric¹⁶. We can say that efficient causation is a strict partial order on the class *S* of actual beings.

As my argument for causal fundamentalia will rely on modal notions, it is therefore of interest to outline the account of modality that is relevant to our purposes.

Metaphysical modality is about how things must be or could have been. Some philosophers take it that the way things must be depends on what those things are, on their essences (Fine 1994).¹⁷ Others think that how things could have been depends on how they could behave or causally interact, which is determined by their powers, dispositions or potentialities (Borghini and Williams (2008); Vetter (2015)). For reasons that will soon become apparent, my own view is that both essences and (causal) powers have a central role to play in modal theorizing.

¹⁶ Transitivity follows from the transitivity of existential dependence. Asymmetry follows from the irreflexivity and transitivity of efficient causation.

¹⁷ I will use "essence" and "nature" interchangeably.

I understand causal powers in terms of abilities to act and participate in the evolution of the causal history of the world. I am now thinking about the argument that I want to defend, I have the power to do so. I take it that it was also open to me that I choose not to exercise that power and be, for example, currently thinking about where to spend my next holidays.

Assuming that there is causal contingency in the world, it seems that any modal theory that is not committed to the possibility of what actual beings could have brought about, by exercising their causal powers differently of how they actually did, is a non-starter. Therefore, it is a minimal commitment of any plausible theory of modality that what actual beings could bring about by exercising their causal powers is possible. Moving beyond this minimal commitment to acknowledge genuine possibilities that all actual beings, past, present and future are collectively incapable to bring about no matter how they exercise their causal powers is unwarranted. Something non-actual that cannot be brought about cannot happen and is therefore impossible.

These considerations lead naturally to an actualist view about metaphysical possibility that is grounded in the causal powers of actual beings. Several actualist views of possibility have been recently developed to ground possibility on the dispositions or the potentialities that actual beings have (Borghini and Williams 2008, Vetter 2015). Whether dispositions, potentialities and causal powers are the same notion or whether some of them can be reduced to others is beyond the scope of the current discussion. What is clear is that the three notions underlie ways in which beings could act. Given that we are interested in causal fundamentality, I will frame my account of metaphysical possibility in terms of causal powers while remaining neutral about the answer to the question of whether the resulting account could have been different if dispositions or potentialities were used instead.

Based on the foregoing discussion, the following definition of metaphysical possibility suggests itself:

Metaphysical possibility: a fact *F* is possible if and only if *F* obtains actually or there is some plurality *xx* of actual beings with iterated causal powers to bring about the obtaining of *F*.¹⁸

Iterated causal powers are understood as causal powers to bring about that there are causal powers to bring about something (with any finite number of iterations allowed)¹⁹. For example, assume that there is currently no computer with enough computational power to solve a certain type of mathematical equations that human beings lack to ability to solve by themselves. If it is within human power to build a computer that solves this type of equation, it is then possible that this type of equation is solved as a matter of humans having a causal power to bring about that there is something that has the power to do the needed task.

Note that the disjunctive form of the definition allows us to count as possible actually obtaining facts that no causal power enables to bring about. This secures, in its full generality, the widely accepted formal requirement that what is actual is possible²⁰.

Finally, recourse to pluralities enables us to capture some possibilities that are not grounded in the causal powers of any given member of a certain plurality but are grounded in the causal powers of these members taken collectively, as in the example of some humans collectively having the power to build a certain type of computer even on the supposition that none of them is individually able to do so.

¹⁸ 'there is' in this definition should be understood timelessly. It can be substituted by 'there was, there is or there will be'.

¹⁹ The terminology of "iterated causal powers" mimics the iterated potentialities of Vetter (2015).

²⁰ Yates (2015) used a similar definition to secure the formal adequacy of dispositional accounts of possibility.

If we mean, as I think we should, by a metaphysically necessary fact one that cannot possibly fail to obtain, this account of possibility gives the following definition.

Metaphysical necessity (dispositionalist reading): a fact *F* is necessary if and only if *F* obtains and there is no plurality *xx* of actual beings with iterated causal powers to bring about the non-obtaining of *F*.

Some philosophers are happy to end here, being satisfied with this definition of metaphysical necessity. Leftow, for example, thinks that this definition ensures that the necessity of necessary facts is not grounded in anything given that it is a matter of absence of causal powers to bring about the non-obtaining of the concerned facts. Absences being nothing, Leftow concludes that the necessity of necessary facts comes for free as a desirable feature of his modal theory (Leftow 2017).

I think that one can move forward to identify what is about actual beings that grounds the absence of causal powers to bring about the non-obtaining of necessary facts. Such a ground would be a ground of the necessity of these facts. Where, then, to look for such a ground? I suggest that this ground is to be found in the essences of (some) beings.

I understand essence in the sense of real definition. The essence of something is what it is to be that thing or what that thing is. As Hale puts it “a definition in the relevant sense is of the thing, rather than of a word standing for the thing” (Hale 2018, p.126). I am sympathetic to the view that a real definition captures what has come to be known as the constitutive essence of the thing that it defines, which includes the most basic features of the thing that cannot be accounted for by other more fundamental features of it (Rosen 2015).

Until recently, the classical view about essence was that essence is analysable in terms of metaphysical necessity. On this view, i.e., classical modalism as described by Torza (2015), a being x has a certain property P essentially if and only if it is necessary that x has P if it exists (Torza 2015, p. 757).

In his celebrated paper “Essence and modality” (Fine 1994), Fine presented a series of counterexamples to classical modalism. I join Fine in thinking that he has shown that essence is a more fine-grained notion that can serve to analyse metaphysical necessity.²¹

If one acknowledges the inadequacy of the modalist account of essence, there is much to recommend in a reduction of necessity to essence. This is because one cannot do without essences in forming a coherent view of reality. It seems incoherent to believe that one can speak about and refer to things if one does not at least believe that those things have identities, whether known to them or not, that make reference and thought be about them and not about other things. It is this notion of identity that corresponds to the notion of essence as used in this paper.²²

If we cannot do without essences, it is therefore interesting to make essences do as much work, in our metaphysical theorizing, as we can make them do. This would allow us to limit the number of fundamental posits in our theories, as good methodological practices require. So, if metaphysical necessity can be reduced to essence, one should not shy from endorsing such a reduction. This is what several philosophers did.

²¹ In addition to Fine’s counterexamples, another objection to classical modalism is that it gets the direction of explanation the wrong way. It is what things are, their essences, that can explain how they must be and not the other way around as the classical modalist implies. Thanks to an anonymous reviewer for pressing me to outline an additional justification for the rejection of classical modalism.

²² A similar point about the indispensability of essence is made in Lowe (2018).

A popular reduction of necessity to essence proposed by Fine is that a fact P is necessary if and only if it obtains in virtue of the nature of some plurality xx of things.²³ As for possibility, recourse to pluralities enables us to capture the necessity of some facts that do not obtain in virtue of the nature of any given member of a certain plurality but obtain in virtue of the natures of these members taken collectively. An example would be the alleged necessary distinctness of Socrates and the Eiffel Tower which does not hold in virtue of the essence of any of these objects taken in isolation but in virtue of their essences when considered collectively²⁴.

This classical reduction of necessity to essence raises some worries related to the inclusion of actual contingent and merely possible objects in the domain whose members ground necessary facts in virtue of their essences (merely possible objects are those, if any, that are possible but not actual). Recent objections to the reduction of necessity to essence are mainly based on uncovering some paradoxes or contradictions that result from the project of reducing necessity to essence while allowing that contingent and merely possible objects are among those whose natures ground necessary facts (Teitel 2019; Wildman 2021). To avoid these objections, I propose the following reduction of necessity to essence.

Metaphysical necessity (essentialist reading): a fact F is necessary if and only if it obtains in virtue of the essence of some plurality xx of independent beings.

This modified reduction of necessity to essence restricts the domain of objects or beings whose natures ground metaphysical necessities to that of independent beings. I mean by an independent being a being that exists in virtue of what it is, in virtue of its essence. If there

²³ I translate Fine's talk about propositions to talk about facts for consistency with the current exposition.

²⁴ I say that this is an "alleged" necessity because I do not take it to be a metaphysical necessity in the absolute unrestricted sense. Socrates and the Eiffel tower are contingent beings, their distinctness does not hold when one of them does not exist.

are independent beings, my modified definition of metaphysical necessity ensures that they exist necessarily.

The main motivation behind this restriction of the domain of beings whose natures ground metaphysical necessities is prohibiting the inconsistent requirement that the natures of some contingent or merely possible beings ground metaphysical necessities that are true even in possible worlds where those beings do not exist (I appeal to possible worlds only as a useful tool for convenience and ease of exposition without any ontological commitment related to their existence).

When it comes to the abstract realm, some might think that it is beyond doubt that there are necessary truths about abstract objects. For example, it is widely held that mathematical truths such as $1+1 = 2$ are necessary. On my view of metaphysical necessity, such truths, if they are to qualify for necessity, must be grounded on the natures of abstract mathematical objects that are independent beings. Taking this observation into account and given that they are causally inert and do no harm, I am happy by courtesy, to give abstract beings the privilege of counting among the independent beings whose natures ground metaphysical necessities. I allow then, for our current purposes, independent beings to be either concrete or abstract.

Given my two definitions of metaphysical necessity that must be equivalent for consistency, I am then committed to the following claim.

A fact F obtains in virtue of the nature of some plurality xx of independent beings if and only if F obtains and there is no plurality yy of actual beings with iterated causal powers to bring about the non-obtaining of F .

The left to right conditional is quite straightforward. If a fact F obtains in virtue of the essence of some plurality xx of independent beings, then there is no power to bring about the non-obtaining of F . This is because independent beings exist in virtue of their essences and therefore cannot fail to exist, which ensures that there is no power to bring about that an independent being does not exist. If one observes that the existence of independent beings entails the obtaining of whatever obtains in virtue of their essences, in every circumstance where they exist, which cover all possible circumstances, one can then conclude that as there is no power to bring about the non-existence of independent beings, there is no power to bring about the non-obtaining of any fact that obtains in virtue of their natures.

What about the right to left conditional? It is useful to reason about its converse that is.

A fact F does not obtain in virtue of the essences of any plurality of independent beings if F does not obtain or there is a plurality xx of actual beings with iterated causal powers to bring about the non-obtaining of F .

If F does not obtain, there is no difficulty in securing the truth of the conditional. If F obtains and not so in virtue of the nature of some plurality of independent beings, its obtaining rests either at least partially on the existence of some dependent beings, their properties and relations or it rests exclusively on non-essential facts about some independent beings, their properties and relations. In the former case, it is plausible to suppose that some of the beings on whose existence, properties and relations the obtaining of F rests can possibly fail to exist. In such a case, F would have failed to obtain. The causal powers that ensure the possibility of the non-existence of the beings on which the obtaining of F depends are powers to bring about the non-obtaining of F . In the last case to consider, F 's obtaining rests

on accidental features of independent beings that could have failed to obtain, leading to the non-obtaining of *F*. The required causal powers to bring about the non-obtaining of *F* lie within the independent beings on whose properties and relations its obtaining rests.²⁵

With the notion of efficient causation and my account of modality on board, let us move on to the exposition of the argument for the causal fundamentality.

3. The argument

My argument for causal fundamentality is a *reductio ad absurdum* of the hypothesis that the actual world contains a being whose causal history does not include any uncaused (fundamental) being. The causal history of some being *x* is the class of all its efficient causes.

The argument can be presented as follows:

- (1) If there is an actual being *x* such that every chain in its causal history *H* is infinite, then there is a possible world *W* where *x*'s having causal history *H* is not possible (premise).
- (2) What is actual is necessarily possible (Brouwer axiom, premise).
- (3) If there is an actual being *x* such that every chain in its causal history *H* is infinite, then there is no possible world *W* where *x*'s having causal history *H* is not possible (from (2), contradiction with (1)).

Therefore,

²⁵ There is an assumption here that independent beings have the powers to bring about any pattern of instantiation of accidental properties by them. This assumption is worth making to preserve the duality of necessity and possibility.

- (4) There is no actual being x such that every chain in its causal history H is infinite (i.e. every actual being has at least one (uncaused) fundamental being in its causal history).

The idea behind the argument is the following. Assume, for the sake of argument, that the actual world contains a being x such that every chain in its causal history H is infinite. Then observe that H is causally closed. No being that is not in H is an efficient cause of some being in H . To exploit this characteristic of H , I propose to bring the proponents of such a causal history, assuming that they do not mind, to a possible world W where none of the members of H exist. It turns out that, from this world, we cannot get to any world containing x with causal history H because nothing in W has the causal power to bring about that x has H as causal history (any causal action to bring about the existence of x would result in it having a causal history other than H). In other words, x 's having causal history H is impossible in W . However, x actually has causal history H and what is actual is necessarily possible, meaning that x 's having causal history H is, after all, possible in W . This contradiction, x 's having causal history H being both possible and impossible in W , enables us to conclude that the starting hypothesis, the actual existence of a being such that every chain in its causal history is infinite, is false. This in turn, shows that every caused being has at least one (uncaused) fundamental being in its causal history.

The argument is valid and has two premises (1) and (2). Among the two premises, (2) is the well-known Brouwer axiom that many philosophers take to be an unnegotiable principle that governs metaphysical modality. This gives some *prima facie* assurance that it is a safe basis for the argument. Premise (1) seems then to be the key premise of the argument.

In the next section, I will go beyond mere intuitions and defend premises (1) and (2) based on my account of metaphysical modality.

4. Defending the premises

4.1 A defence of premise (1)

Premise (1) asserts that on the supposition that the actual world contains a being x such that every chain in its causal history H is infinite, there is a possible world W where x 's having causal history H is not possible.

One such world is one in which none of the members of H exist. Taking advantage from the dual definitions linking possibility and necessity, we can show that it is possible that none of the members of H exist by showing that it is not necessary that some of the members H exist.

For it to be the case that it is necessary that some of the members of H exist, it must hold in virtue of the essences of some plurality of independent beings that some of H 's members exist. To see that this cannot be the case, let us start by observing that none of the members of H is an independent being. This is because each of the members of H exists because it is caused to exist and does not therefore exist in virtue of its essence.

Once we have seen this, it becomes clear that all independent beings lie outside H . If we recognize further that there is nothing in the essences, the real definitions, of the independent beings that are all external to H , that necessitates the existence of some members of this causal history, we arrive to the conclusion that it is not in virtue of the

essences of any plurality of independent beings that some of the members of H exist.²⁶ This licences the intended result that it is possible that none of the members of H exist.

Now, there is a possible world W that contains none of the members of the supposed causal history H . From the standpoint of W , the possibility of x 's having causal history H is conditional on the existence in this world of some plurality of beings with iterated causal powers to bring about that x has this causal history.

Could there be such a plurality of beings with the needed powers to make x have H as causal history? The answer is no. Any causal action, starting from W , to bring about the existence of x would guarantee that it has a causal history other than H . This is true because no being in W is part of H . Therefore, starting from W , any possible world that contains x will contain it with a causal history other than H .

This being so, it follows that x 's having causal history H is not possible in W .

4.2 A defence of premise (2)

Premise (2), the Brouwer axiom that ensures the symmetry of the accessibility relation between possible worlds, can be derived from my account of modality in the following way.

Were the exercise of some causal powers different from what it is, in the actual world, leading to another world W being actualized, it would have remained true in W that it is within the powers of actual beings to exercise their powers as they actually did. This reasoning is valid given that the causal powers that beings have do not depend on which powers they actually exercise. Pruss notes, when defending his Aristotelian account of

²⁶ I am happy to allow that it might be the case that no real definition of some being x can be given without *including* a being y on which x ontologically depends. What I deny is that the real definition of a being x *includes* beings on which it does not ontologically depend. Given that no independent being ontologically depends on some members of H , it is not true in virtue of the nature of any independent being that some members of H exist.

modality, that “It is important that what the powers of an item (state of affairs or substance) at t are, the actualization of which powers grounds various possibilities, should not itself depend on which of these powers are actualized. For then the powers would not be prior to the actualization.” (Pruss 2001).

This shows that premise (2) is well justified given the account of modality under which the argument is developed.

5. The commitment to independent beings

We have seen how my account of metaphysical modality supports causal fundamentality. The strength of the overall support gained by this thesis is of course dependent on the standing of my modal account as a serious competitor of other popular accounts of modality. One main worry would be that the hybrid dispositional-essentialist foundation of my account makes it lose in parsimony in comparison with purely essentialist and dispositionalist theories of modality that have less fundamental posits. It is beyond the scope of this paper to provide a full defence of the merits of my modal account, but I can say that the interplay between essences and powers should allow it to do honourably well in addressing the classic objections levelled against modal essentialism and dispositionalism. Moreover, I think that, ultimately, an essentialist foundation of powers may be within reach. If powers are grounded in essences, there would be only one fundamental posit in my account, which is essences. But this is another story that I have to leave for another occasion.

My aim in this section is rather modest. My account of metaphysical modality carries in it a commitment to the existence of concrete (independent) necessary beings that some might find problematic because they hold that all concrete beings are contingent. I would like to

argue that this is no extra cost of my account in comparison with standard essentialist and dispositionalist accounts of modality.

Let us first see how a commitment to the existence of independent beings emerges from my modal account. To do so, let us start by considering the fact *E* 'something concrete exists'. Given that something concrete exists actually, it turns out that *E* is necessary on my modal account. This is so given that the supposition that it is possible that *E* does not obtain is incompatible with dispositionalist accounts of possibility such as the one I am committed to. The argument for this incompatibility can be given as follows.

- a. If an empty world is accessible from the actual world, then the actual world is accessible from that empty world (premise).
- b. The actual world is not accessible from any empty world (premise).

Therefore,

- c. No empty world is accessible from the actual world.

An empty world is one in which nothing concrete exists.

The argument given in §4.2 shows that dispositional accounts of possibility are committed to Brouwer's axiom. Premise (a) is an application of this axiom that entails that the accessibility relation between possible worlds is symmetric. Premise (b) is a direct consequence of the dispositionalist requirement that possibility depends on being. In an empty world, there is nothing with iterated power to bring about the existence of something concrete. It is thus impossible for there to be something concrete, as it is actually the case, from the standpoint of an empty world. This means that, as premise (b) states,

that the actual world is not accessible from any empty world.²⁷ One can then conclude that, given that something concrete exists, it is necessary that there are concrete beings.

On my modal account, the necessity of there being something concrete is so in virtue of the essences of some plurality of independent beings. This can be so only if there are, actually, concrete independent beings. It follows then that my account of modality carries in it a commitment to the existence of necessary (independent) concrete beings.

What about purely dispositionalist accounts of modality? Do they support a commitment to the existence of necessary concrete beings? To answer this question, I will rely on the previous result that dispositionalist accounts of possibility are committed to the necessity of there being something concrete. If dispositionalists were to insist that all concrete beings are contingent, their view would have the bizarre consequence that the non-existence of some contingent concrete beings necessitates the existence of other contingent beings. It is hard to see how such a commitment can be made plausible under a purely dispositionalist account of modality. It seems then that the best move for dispositionalists is to accept the existence of necessary concrete beings, which makes their view on a par with mine when it comes to the specific consideration regarding the commitment to necessary concrete beings.

When it comes to standard modal essentialism *à la* Fine (1994), it seems that it is already committed to necessitism, the view that everything exists necessarily, and *a fortiori* to the necessary existence of *all* concrete beings. Assuming that it is essential to Socrates to be

²⁷ Concrete beings are those that can enter into causal relations. Abstract beings are those that cannot enter into causal relations and cannot bring about the existence of something concrete.

human, on standard modal essentialism, the fact that 'Socrates is human' is necessary. This could not be the case if it was possible that Socrates does not exist.²⁸

One can then conclude that a commitment to necessary concrete beings can hardly be escaped by some of the most serious competitors of my hybrid account of metaphysical modality and that such a commitment is not, after all, a cost that is specific to my own account.

6. Conclusion

I have given an argument for causal fundamentality understood as the thesis that the causal history of every being, whose existence has a causal explanation, includes some uncaused beings. The premises of the argument are consequences of the account of metaphysical modality on which it relies.

A main motivation behind my modal theory is a return to basics about modality as captured in the pre-theoretical meaning of metaphysical necessity and possibility. I contend that my theory is, to its advantage, extensionally correct and minimalistic. Its range of metaphysical necessities and possibilities is just as wide as needed to capture the pre-theoretical notion of modality. Furthermore, my theory is immune from the necessitism of standard essentialist accounts of modality and addresses the challenge of global possibilities facing dispositionalist modal theories thanks to its essentialist component. Finally, my theory's commitment to independent beings does not speak against it in comparison with purely dispositionalist and essentialist modal accounts given that those, if they are to retain their plausibility, must be committed as well to the existence of necessary concrete objects.

²⁸ Teitel (2019) presents an interesting argument that supports further the conclusion that modal essentialism is committed to necessitism.

Regarding the question of causal fundamentality, mere intuition was usually the sole basis on which arguments for this thesis were built. Meyer nicely summarizes the traditional line of argument against infinite causal regression (which, if successful, entails causal fundamentality).

Everything has a cause. And the cause of everything has a cause. So metaphysics teaches. Project any of these causal sequences indefinitely back, without limit, and the mind boggles. Whence there is a First Cause. (Meyer 1987, p. 345).

Turning this simple intuition to a cogent argument has not been, as far as I know, a success. Aquinas, to take a famous example, hardly escapes circular reasoning in his Second Way for the existence of God when he argues that “if there be no first cause among efficient causes, there will be no ultimate, nor any intermediate cause.” (Aquinas 2006).

Nowadays, things do not seem so different. A recent example is Schaffer who argues for ontological foundationalism relying on the intuition that, in the absence of some ontologically fundamental level, “being would be infinitely deferred, but never achieved” (Schaffer 2010, p. 62).

To move beyond mere intuitions and avoid the charge of question-begging, I proposed a different kind of argument that exploits the recent advances in our understanding and theorizing about causality, essence, and modality, to propose a modal theory that can be considered seriously given its advantages and that speaks directly for causal fundamentality. I hope that this work will pave some new paths to explore regarding the lively debates about causal fundamentality and theories of modality.

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Paper 3

Ontological Rationalism

1. Introduction

When contemplating the world in wonder, many of us consider the existence of the various beings with which we are acquainted and ask, 'Why do these beings exist?'. Could there be a satisfactory explanation for the existence of every being? Many would like this question to have an affirmative answer and reject any view that precludes the prospect of satisfactorily explaining existence. Their motivation in doing so is merely their unconditional wish to make sense of reality in all its aspects. Adopting such a position on the sole basis of the desire for explanations is an exercise of wishful thinking. Reality is not bound to satisfy our demands and wishes.

That being the case, it remains open that one arrives, on principled grounds, to the conclusion that reality is such that there is an explanation for the existence of every being. This is what I would like to show.

In this paper, I argue for Ontological Rationalism (OR), the thesis that every concrete being is either dependent or independent. A dependent being is one whose existence is due to the causal activity of other beings, while an independent one exists in virtue of its essence independently of the causal activity of others. In either case, we have an explanation of the existence of any given concrete being in its essence or in the causal activity of other beings.²⁹

I begin by considering the prospects of justifying OR on the basis of a much broader rationalism – one that appeals to a strong version of the Principle of Sufficient Reason (PSR).

²⁹ In what follows, the word 'being' will stand for 'concrete being'. Abstract beings, if any, are beyond the scope of my discussion, which is restricted to beings that can enter into causal relations.

Given the serious difficulties facing an unrestricted PSR, I conclude that one would be better off finding another ground for OR. I then turn to considering Pruss's (2004) restriction of the PSR and argue that it is a suitable ground for OR. Finally, I strengthen the case of OR through a direct modal argument and address a main threat to the said argument's project.

§2 is dedicated to a discussion of some of the main objections that have been directed to the PSR. In this section, I also present a new line of argument against an unrestricted PSR.

In §3, I present a restricted PSR that is immune from the objections of §2 and argue that it can justify OR. §4 strengthens the case of OR through a direct modal argument and §5 addresses a main threat to its project. §6 concludes the paper.

2. Against an unrestricted principle of sufficient reason

Let us consider the following strong PSR as a candidate for justifying OR:

PSR: every contingent fact has a sufficient reason.

In what follows, I understand facts as ways that things are. A fact might involve the existence of some objects, their exemplification of some properties, and their standing in certain relations. For example, 'Donald Trump is the forty-fifth president of the USA' is a fact involving an object, 'Donald Trump', who exemplifies the property of 'being the forty-fifth president of the USA'.

For modal discourse, I shall be using the terminology of possible worlds, understood as complete specifications of how the world might have been, where the world stands for 'all there is'. A contingent fact is a fact in some, but not all, possible worlds, whereas a necessary fact is a fact in all possible worlds.

I take the explanation of fact *F* by fact *E* to give an informative answer to the question ‘why *F*?’, and assume that a sufficient reason entails what it explains. Furthermore, I impose irreflexive and asymmetry constraints on explanations whose explanandum is a contingent fact. That is, no contingent fact *F* can be explained by itself and, if fact *E* explains a contingent fact *F*, then it is not the case that *F* explains *E*. Finally, I take explanation to be transitive in the sense that, if *F* is explained by *E* and *E* is explained by *D*, then *F* is explained by *D*.

Now that the notions of facts and explanation have been clarified, let us see how PSR supports OR.

To do so, let us consider the existential facts of the form ‘*x* exists’, where *x* is a given being. The PSR ensures that there are no contingent existential facts that lack a sufficient reason. If one accepts that the explanation of existential facts must involve the causal activity of some beings, then it follows that any fact that explains a contingent existential fact must involve some causal relationships that lead to the existence of the concerned being. Now, if something does not exist essentially, it is plausible to hold that its existence is contingent. In other words, if something does not carry in its essence the reason for its own existence, it need not necessarily exist. Its existence would be contingent. If this is right, it would follow that every being is such that its existence is essential and necessary or it is contingent and causally explained.

The preceding considerations, supported by the PSR, imply that any being is either dependent or independent, existing essentially. OR amounts to this.

It would then seem justified to claim that, if one has a good reason to endorse the PSR, one would have a good reason to accept OR. Unfortunately, the natural appeal of the PSR as a justification of OR is threatened by the notorious problems that the former faces.

The remainder of this section discusses three arguments that are intended to provide a counterexample to the PSR following different strategies and relying on different interpretations of the PSR's explanatory demand. I then introduce a fourth argument against the PSR that can be seen as more devastating for its explanatory project.

I conclude that the presented objections, although not necessarily conclusive, strongly suggest that more solid justifications of OR are needed.

2.1 The challenge of the big conjunctive fact

Van Inwagen (1983) and Bennett (1984) advanced a line of argument against the PSR that was considered by many philosophers to be a conclusive refutation of the principle or, at least, a strong reason to force its proponent to endorse necessitarianism, the view that all facts are metaphysically necessary. As a position that seems highly implausible, necessitarianism's entailment by the PSR removes much of this principle's initial appeal. The argument of van Inwagen and Bennett can be formulated as follows. Suppose that the PSR is true and let *C* be the conjunction of all contingent facts. Through PSR, *C* has a sufficient reason *R*. *R* entails *C* and cannot then be necessary given that *C* is contingent and that every fact entailed by a necessary fact is itself necessary. *R* cannot be contingent either because *R* would in this case be a conjunct of *C* and thus explain itself, which is impossible for a contingent fact. Given that every fact is either necessary or contingent, there cannot be any explanation of *C*, contrary to what the PSR requires.

According to the argument, the proponent of the PSR is then forced to choose between abandoning the principle or denying that there are contingent facts, which amounts to endorsing necessitarianism.

Levey (2016) responded to this by noting that it can be taken to show that there is no conjunction of contingent facts.³⁰ Levey considered two options. First, there are too many contingent facts to form a conjunction. Second, contingent facts are indefinitely extensible, meaning that for every plurality *FF* of contingent facts, one can build by reference to the members of *FF* a further contingent fact *F* that does not belong to *FF*. If so, there cannot be a conjunction of all contingent facts.³¹ If Levey is right, the van Inwagen-Bennett challenge to PSR is not as successful as it is usually taken to be.

Dasgupta (2016) countered the van Inwagen-Bennett argument somewhat differently. He took the explanatory demand of the PSR to be in terms of grounding and observed that a ground for *C* need not ground any of its conjuncts. However, McDaniel (2019) proposed an interesting argument aiming to show that, even on the grounding reading of Dasgupta, a line of thought similar to that of van Inwagen-Bennett can be developed against the PSR. Let us examine McDaniel's argument more closely.

2.2 Against the grounding reading of PSR

McDaniel (2019) considered a grounding-based reading of the PSR where the explanatory relation is that of grounding.

To develop his argument against PSR, McDaniel took the following assumptions about grounding:

³⁰ See also Tomaszewski (2016) for an argument against a conjunction of all contingent truths.

³¹ Levey's argument is formulated in terms of contingent facts instead of contingent facts.

Plural-to-plural: the grounding relation holds between pluralities of facts.

Entailment: if a plurality of facts *XX* grounds a plurality of facts *YY*, then *XX* entails *YY*.

General irreflexivity: necessarily, if two pluralities of facts *XX* and *YY* overlap, then *XX* is not a full ground of *YY*.

The version of the PSR that McDaniel objects to says that any plurality of contingent facts has a full ground. McDaniel's reasoning can be stated as follows.

Let *CC* be the plurality of all contingent facts. According to the PSR, *CC* has a full ground *RR*. The members of *RR* are either all necessary facts or include some contingent facts. If all the members of *RR* are necessary, the entailment assumption about grounding would imply that *CC* members are necessary contrary to our supposition that they are contingent. Therefore, *RR* members cannot all be necessary. If some members of *RR* are contingent, *RR* overlaps *CC*, that is the plurality of all contingent facts. General irreflexivity rules out *RR* being a full ground of *CC* in this case, contrary to our supposition. It follows that no member of *RR* can be contingent. This leads to the contradiction that *RR* must both have some contingent members while also not being able to have any such members. McDaniel concludes then that the proponent of the grounding reading of the PSR faces the same dilemma that the van Inwagen-Bennett argument presses: one needs either to reject the PSR or embrace necessitarianism.

As McDaniel acknowledged, it is of course open to the proponent of the PSR to reject one of the three assumptions about grounding that the argument needs. It seems that general irreflexivity is the weakest of these three.³² Furthermore, Levey's (2016), mentioned in

³² For an argument against the grounding entailment assumption, see Skiles (2015) and Wilson (forthcoming).

relation to the van Inwagen-Bennett challenge to PSR, can be invoked to deny there being a plurality of all contingent facts.

Although subject to the same argumentative responses as the van Inwagen-Bennett argument, McDaniel's argument shows that a grounding reading of the PSR does not improve the principle's immunity to counterexamples.

2.3 Positive contingent facts

Rowe (1971) advanced a further challenge to the PSR, wherein he considered the following fact:

F: there are positive contingent facts.³³

Where positive contingent facts are contingent facts that entail the existence of at least one concrete object.

Rowe's reasoning holds that *F*, a contingent fact, cannot have a sufficient reason. For if *F* has a sufficient reason *R*, *R* cannot involve some contingent beings in pain of being itself a positive contingent fact that cannot provide a sufficient reason for *F*. Rowe is here imposing the constraint that no positive contingent fact can provide a sufficient reason for *F*.

Can then a fact *N* about some necessary beings give a sufficient reason for *F*? Rowe's argument suggests a negative answer along the following lines: *N* cannot be contingent given that it will be itself a positive contingent fact that cannot explain why there are positive contingent facts. *N* cannot be necessary either for, *N* being a sufficient reason for *F*, *N* would entail *F* and no necessary fact can entail a contingent fact. In conclusion, *F* cannot have a sufficient reason.

³³ Rowe (1971) reasons in terms of states of affairs. I adapt his reasoning to facts to keep our discussion uniform.

The question naturally arises as to whether Rowe's challenge to the PSR is stronger than that of van Inwagen-Bennett and McDaniel. Rowe's is seemingly stronger in that his challenge is not based on requiring an explanation of some comprehensive conjunction or plurality of facts. If so, Levey's (2016) response is impotent against Rowe's argument. However, I think that, on closer inspection, the fact *F* that Rowe considers is a conjunction or plurality of facts. Indeed, *F*, as expressed by Rowe, is a fact about facts that is reducible to the conjunction or plurality of positive contingent facts. I claim that a fact about facts (that is, a second-order fact), is just the conjunction or plurality of the facts that it is about. If I am right, Rowe's challenge, in its reliance on a problematic conjunction or plurality of facts to provide a counterexample to the PSR, does not improve on the two previously-presented arguments. The parity between the three arguments becomes more apparent when one notes that they all rely on entailment and irreflexivity assumptions about sufficient reason.

Further to the previously-surveyed potential responses of PSR proponents, Smith (1995) challenged the general irreflexivity assumption by differentiating between the two facts:

F: There are positive contingent facts.

And

C: There are contingent facts.³⁴

Smith argued that Rowe's argument fails because it is in fact directed to show that *C* cannot have an explanation. While happy to grant that *C* cannot have an explanation, Smith maintained that *F* could be explained and argued that an explanation of this fact must not explain every positive contingent fact due to there being a difference between explaining why there are positive contingent facts and explaining every positive contingent fact. Smith

³⁴ This is an adaptation of Smith (1995) who reasons in terms of facts rather than facts.

contended that the below fact G is an acceptable candidate for the explanation of F , although it is itself a contingent positive fact on the assumption that God's will is free.

G: God wills that there are contingent concrete objects.

Smith concluded that 'the project of explanatory rationalism is not as hopeless as some have maintained. There can be no sufficient reason for each positive contingent fact, but there can be a sufficient reason why there are positive contingent facts at all'. (Smith 1995, p. 242)

Rowe (1997), addressing Smith's objection, insisted that a circular explanation as that given by G of F cannot count as an acceptable sufficient reason that satisfies the PSR's requirement. Adjudicating the dispute depends on a closer look at general reflexivity that I should leave for another occasion. To strengthen the case against the PSR, I instead offer a new argument against it that does not use general reflexivity and does not assume there to be a conjunction of all contingent facts.

2.4 A new paradox of sufficient reason

The first step in my new case against the PSR is to argue that the conjunction of the following three theses is inconsistent.

1. PSR: every contingent fact has a sufficient reason.
2. The Axiom of Global Choice (AGC).
3. Contingentism: there are contingent facts.

Before providing a more rigorous derivation, let me begin with an informal statement of the proof of this inconsistency. The proof exploits the excessive strength of the PSR that extends its explanatory requirement to contingent facts of the form (t is a sufficient reason for u) for some contingent facts t and u . This leads to the conclusion, proved in what follows, that

every explanatory sequence of contingent facts, each being a sufficient reason for its predecessors, has an upper bound: a contingent fact that is a sufficient reason for each of the sequence's members. This seems to be faithful to the spirit of rationalist principles that extend the explanatory demand to facts about the arrangement of contingent facts in explanatory sequences regardless of the length of the sequences concerned. This is the kind of move made by Leibniz in his famous version of the cosmological argument for the existence of God, where he presented the following PSR-based reasoning:

With the world [...] however far back we might go into earlier and earlier states we'll never find in them a complete explanation for why there is any world at all, and why the world is as it is.

It's not that in the backward search we'll reach a first state of the world, with no earlier one to explain it. So far as that is concerned, you are welcome to imagine that the world has always existed. But you are assuming only a succession of states, and no reason for the world can be found in any one of them (or in any set of them, however large); so obviously the reason for the world must be found elsewhere.

(Leibniz, 1697, p. 1-2)

Based on the explanatory demand of the PSR, Leibniz's reasoning requires that any explanatory sequence of contingent states (in our context, facts) has a sufficient reason that explains each of its members. The finitude or infinity of the sequence does not matter. All sequences of contingent facts must have an external sufficient reason.

Once this much is granted, all the ingredients for a paradox are in place. We can follow the below procedure, assuming the AGC and contingentism, to find a counterexample to the PSR: a contingent fact that does not have a sufficient reason.

Procedure	Justification
Initialization 1. Let c be some contingent fact 2. Let S be the sequence $\{c\}$ Loop WHILE c has a sufficient reason (among contingent facts) 3. Reset the value of c such that it is an upper bound of S IF c does not have a sufficient reason (among contingent facts), END ELSE 4. Let $S = S \cup \{c\}$ (the union of S and $\{c\}$) END IF END WHILE	Step 1 is feasible given the assumption of contingentism. Step 3 is guaranteed to succeed at each iteration, even if we have to iterate an infinite number of iterations and potentially exhaust all contingent facts, thanks to: 1. The AGC that permits an infinite number of choices of the value of c (we make one choice at each iteration of the loop). 2. The assumption that each sequence of contingent facts, ordered by sufficient reason, has an upper bound (as stated above, proof of this is shown during the formal derivation of the paradox).

This procedure is guaranteed to find a contingent fact c that does not have a sufficient reason among contingent facts. Given two widely accepted principles about sufficient reason:

1. Sufficient reason is necessitating: if t is a sufficient reason for u , then necessarily t entails u (therefore no necessary fact can be a sufficient reason for a contingent fact as no necessary fact entails a contingent fact).
2. No contingent fact can be its own sufficient reason.

c does not have a sufficient reason at all, thus constituting a counterexample to the PSR.

Now that the paradox has been informally derived, we can now begin the formal proof with preliminaries and useful definitions.

Sufficient reason is a strict partial order over contingent facts. That is, sufficient reason is a binary relation between contingent facts that is irreflexive, asymmetric, and transitive. Let us take $SR(t,u)$ to denote ' t is a sufficient reason for u ' for some contingent facts t and u . We then have:

Irreflexivity: there is no contingent fact t such that $SR(t,t)$.

Asymmetry: for every contingent facts t and u , if $SR(t,u)$ then $\sim SR(u,t)$ (the symbol $\sim$ stands for negation).

Transitivity: for every contingent facts t , u and v , if $SR(t,u)$ and $SR(u,v)$, then $SR(t,v)$.

A class S of contingent facts is totally ordered by sufficient reason if and only if for every facts t and u in S , we have $SR(t,u)$ or $SR(u,t)$.

An upper bound of a class S of contingent facts is a contingent fact u such that for every t in S , $SR(u,t)$.

A maximal element of the class of contingent facts is a contingent fact u such that for every contingent fact t , $\sim SR(t,u)$ (there is no contingent fact that is a sufficient reason for u).

It is now possible to show that the PSR and contingentism entail that every class of contingent facts that is totally ordered by sufficient reason has an upper bound.

Let S be a non-empty class of contingent facts that is totally ordered by sufficient reason. If S is finite, S trivially has an upper bound.

If S is infinite, The fact $c = (S \text{ is totally ordered by sufficient reason}) = (\text{for every facts } t \text{ and } u \text{ in } S, SR(t,u) \text{ or } SR(u,t))$ is contingent.

Through the PSR, there is a contingent fact r such that $SR(r,c)$.

A sufficient reason for such a generalisation as c is a sufficient reason for each of its instances. The instances of c are disjunctions of the form $SR(t,u)$ or $SR(u,t)$ for some t and u in S . A sufficient reason for a disjunction is a sufficient reason for at least one of its true disjuncts.

Given that S is infinite, for every u in S there is t in S , such that $SR(t,u)$ and $\sim SR(u,t)$, so that $d = (SR(t,u) \text{ or } SR(u,t))$ is true and has one true disjunct that is $SR(t,u)$. We now have $SR(r,d)$, which implies $SR(r,SR(t,u))$. A crucial step in the proof is to observe that, for every contingent fact t and u , $SR(SR(t,u),u)$. In other words, the fact (t is a sufficient reason for u) is itself a sufficient reason for u . It follows then from $SR(r,SR(t,u))$, by the transitivity of sufficient reason, that $SR(r,u)$. r is therefore such that for every u in S , $SR(r,u)$. This means that r is an

upper bound of S . Given that S was arbitrarily chosen, it would thus follow that every class of contingent facts that is totally ordered by sufficient reason has an upper bound.

It is here that the AGC comes into play in the form of its equivalent lemma that can be stated as follows.

For every nonempty class X and relation R , if R is a partial order on X such that every subclass of X which is totally ordered by R has an upper bound, then X has a maximal element.

A straightforward application of this lemma to the class of contingent facts, ordered by sufficient reason, entails that there is a contingent fact u such that it has no sufficient reason among contingent facts. Given that sufficient reason is necessitating, no necessary fact can be a sufficient reason for a contingent fact. It then follows that u , a maximal element of the class of contingent facts, does not have a sufficient reason at all. This contradicts the PSR.

As stated at the outset, the conjunction of the PSR, AGC, and contingentism is inconsistent. My argument to derive this inconsistency surpasses that of van Inwagen and Bennett in that it does not rely on the possibility of forming the conjunction of all contingent facts. Furthermore, the AGC seems to be required to justify the possibility of forming a conjunction of all contingent facts. This is because the belief that there is a conjunction of all contingent facts ought to be justified by the notion that it is possible to form such a conjunction. The conjunction of all contingent facts, being an infinite conjunction, can be formed only if it were possible to take the contingent facts in a certain *order*, and iteratively construct their conjunction, each time conjoining the next fact with the conjunction of previous ones, holding that contingent facts can be ordered to allow the construction of their conjunction amounts to endorse the AGC. Therefore, it seems that the AGC is in fact

another implicit assumption in van Inwagen and Bennett's argument and is not an extra assumption in my new paradox of sufficient reason.

It is worth noting that it would be *ad hoc* for a proponent of the PSR to react to this new paradox by rejecting the AGC. This is because the only defensible reason that is given for this rejection is the AGC's non-constructive character. The AGC states that some object exists without providing a procedure with which to construct it. Now, a proponent of the PSR is not in a good position to reject the AGC because of its non-constructive character. This is simply because the PSR itself is as non-constructive as any principle can be. The PSR asserts that every contingent fact has an explanation. However, it does not tell us how to find or know such a sufficient reason. The PSR tells us that, regardless of whether it is knowable, a sufficient reason exists.

If I am right, the PSR can be believed to be true only if it is believed to be vacuously so. The PSR can be true only if there are no contingent facts to which it applies, or only if it does not apply at all. Accordingly, endorsing such a principle appears rather fruitless. The PSR would be superfluous as one could simply endorse necessitarianism and hold that there are no contingent facts.

The foregoing discussion suggests that the conclusion to draw from this new paradox is that the PSR is either false or idle and that, if there is contingency at all, there has to be brute unexplained contingency.³⁵

³⁵ Based on the conjunction-distributivity of sufficient reason, a proof in the style of the Church-Fitch knowability paradox entails the stronger result that, if there is contingency at all, there has to be brute *unexplainable* contingency. See Oppy (2000) for further details.

3. A restricted principle of sufficient reason

The above discussion shows there to be serious challenges to the validity of the PSR. Given the plausibility that many find in the rationalism behind the PSR, as well as the prevalence of explicability-based arguments in all areas of philosophy and science, it would seem reasonable to endorse a restricted PSR (RPSR) that is immune from these aforementioned difficulties than to reject rationalism entirely.³⁶

The following straightforward restriction of the PSR was adapted from Pruss (2004).

RPSR: every contingent fact that has an explanation in some possible world has an explanation in the actual world.

RPSR restricts the demand for explanation for contingent facts to those that are possibly explained. I join Pruss (2004) in holding that this restriction is not ad hoc. If one thinks that there are unexplainable contingent facts, one could not reasonably endorse a principle that requires them to have an explanation, but could still endorse a principle that requires the same of explainable contingent facts.

There are several reasons that can lead to the belief that there are unexplainable contingent facts. First, one can be committed to taking quantum indeterminacy to be a real and objective basic feature of the world. If so, contingent facts about the outcomes of chancy quantum events cannot, in principle, be explained. Second, one can believe there to be beings enjoying libertarian free will and that acts of free will are, by definition, contingent and ultimately unexplainable. Third, one can take the arguments of the previous section to

³⁶ Della Rocca (2010), while defending the unrestricted PSR, provided a useful survey of some influential explicability arguments that one would like to be able to endorse without committing to a strong version of the PSR.

show that there are contingent facts that cannot be explained, e.g., the conjunction of all contingent facts.

Despite these reasons to believe that there are unexplainable contingent facts, it remains open that every explainable contingent fact has an explanation. It is precisely this that the RPSR requires, thus retreating from the unrestricted explanatory demand of the PSR.

The RPSR has the advantage of not being subject to any of the objections to the PSR discussed in the previous section, and is compatible with the inexplicability of quantum events and acts of libertarian free will.

Is the RPSR still strong enough to yield support for OR? To answer this question, it is useful to remember that the contingent, non-essential, facts that OR requires a causal explanation for are contingent existential facts of the form 'x exists', where x is a contingent being. If all such facts are explainable, they fall under the scope of the RPSR that ensures that they have an explanation, thus satisfying OR's explanatory demand.

Could there be unexplainable, non-essential contingent existential facts? If so, there would be a contingent being x that does not exist in virtue of its essence and whose existence is not causally explainable. Why would this be so? I can only think of a motivation for such a claim based on Kripke's (1980) origin essentialism. Given origin essentialism, x's absence of causal origin would be essential to it. The existence of x being uncaused, x could not be caused in virtue of its nature. Only an independent being that exists in virtue of what it is, independently of the causal activity of other beings, can enjoy such a necessary immunity from external causation. If only independent beings can be uncausable, it would follow that all other beings are causable and, given the RPSR, caused, thus satisfying the demand of OR.

As things stand, the RPSR seems to be a solid principle upon which to rest one's endorsement of OR. The RPSR is a natural restriction of the PSR. It is immune from the serious objections directed to the PSR and allows one to retain a rationalism whose scope is broad enough to justify the plausible appeal to explicability in many contexts. Furthermore, there appears to be a direct route from the RPSR to OR that can be seen as the former's restriction to existential facts.

Having found a plausible justification of OR in the RPSR, the next section is dedicated to strengthening the case for OR through a direct modal argument.

4. A direct argument for OR

4.1 The argument

OR requires that every being is either dependent or independent. A being whose existence would be a counterexample to OR is one that would exist uncaused while it does not exist in virtue of its essence. As far as its essence is concerned, the existence of this being is left open.

I here derive a contradiction from the hypothesis that there is a being that is neither dependent nor independent (with these notions being taken as defined in §1) to provide an argument for OR.

The argument can be presented as follows:

- (a) If there is a being x that is neither dependent nor independent, its existence is not caused (premise, true by definition).
- (b) Every being whose existence is causable exists only if it is caused to exist (premise).

(c) If there is a being x that is neither dependent nor independent, its existence is causable (premise).

(d) If there is a being x that is neither dependent nor independent, its existence is caused (from (b) and (c)).

(e) If there is a being x that is neither dependent nor independent, its existence is caused and not caused (from (a) and (d)).

Therefore,

(f) There is no being that is neither dependent nor independent (from (e)).

(g) **OR:** every being is either dependent or independent (from (f)).

The argument is valid and has two non-trivial premises (b) and (c). I already motivated (c) in §3 through arguing that only an independent being can be uncausable. The remainder of this section provides an argument for (b).

4.2 An argument for premise (b)

Premise (b) requires that every actual being that *can* be caused to exist *is* caused to exist. My justification of (b) rests on endorsing a form of counterfactual dependence as a necessary condition of causation. Restricting our attention to cases where some existential fact is caused, this necessary condition on causation can be expressed as:

Causal counterfactual dependence (CCD): if x is caused to exist, then were x not caused to exist, it would not exist.

Counterfactual dependence seems to be at the heart of our concept of causation.³⁷ When we ascribe a causal role to some events in causing an event e , we hold that these causes

³⁷ For useful discussions of the relation between counterfactual dependence and causation, refer to the essays in Beebe, Hitchcock, and Price (eds.) (2017).

made a relevant contribution to the occurrence of e , without which e would not have occurred. Causation cannot be superfluous to the occurrence of some caused effect. If that event occurred *because* it was caused, then it would not have occurred had it not been caused.

It is worth stressing that the condition of causal counterfactual dependence, for the cases that are of interest for my defence of (b), is formulated to be compatible with causal overdetermination.

CCD can be read in either a strong or weak reading. The strong reading requires the metaphysical impossibility of the uncaused existence of a caused being. On this reading, if the existence of some being x is caused at some world W , then there is no possible world where x exists uncaused.

The weaker reading is based on Lewis's (1987) analysis of counterfactuals, wherein CCD requires that, if the existence of some being x is caused at some world W , then there is a world W' where x 's existence is not caused and x does not exist that is closer to W than any other world where x exists uncaused.

The notion of similarity or closeness of worlds can be informally understood as meaning that a world W' is closer to W than world W'' if accessing W' from W requires *less deviation* from W than is required to access W'' from W .

I will only need the weaker reading to argue for (b):

Suppose that there is, in the actual world, a being x whose existence is causable but uncaused. Given that x is causable, from the standpoint of the actual world, there is a causal

sequence that starts from some actual beings and leads to the caused existence of x .³⁸ It could be the case that there is one or more actual beings capable of directly causing the existence of x , with the only required deviations from the actual world being the causal relationships between said beings and x . If not, a causal sequence leading to the caused existence of x can be constructed with minimal deviation, each time adding only causal relationships that are necessary for the caused existence of x . Such sequence S does not contain any element whose non-occurrence permits the caused existence of x .

Starting from the actual world and following S , we cross several possible worlds where x exists uncaused and arrive at a world W where x 's existence is directly caused by members of S . The construction procedure of S ensures that the closest world to W where x is not caused to exist is a world where x exists uncaused.

Now, x is caused to exist and (the weak reading of) CCD requires the closest possible world to W where x is not caused to exist to be a world where x does not exist.

The supposition that x is causable and uncaused thus leads to a contradictory conclusion wherein the closest possible world to W where x is not caused to exist is a world where x both does and does not exist. It follows that this starting supposition is false and that every being whose existence is causable is actually caused to exist, which is premise (b) of this section's argument for OR.

5. A doomed argument?

In this section, I address a main objection whose success would be devastating for the project of the modal argument for OR of §4.

³⁸ One can object that the existence of a causal chain starting from something actual and leading to the caused existence of x is only justified under a dispositionalist account of metaphysical possibility. I consider this objection and its implications for my argument in §5.

The objection is that my modal argument for OR relies on a dispositionalist account of metaphysical possibility that entails a strong version of the PSR. As such, my argument for OR cannot stand without a commitment to the PSR, rendering the argument both superfluous and untenable. The argument would be superfluous given that SPSR directly entails OR without a need for a separate argument. Moreover, the argument would be untenable because its soundness relies on that of the SPSR, which faces several serious objections (see §2).

As we saw in §4.2, the argument for premise (b) of my modal argument for OR relies on the claim that, if the existence of a given being is causable, then there can be a causal chain beginning with something actual and culminating in the existence of the said being.

Depending on the account that one holds regarding the nature of metaphysical possibility, the existence of such a causal chain might be either trivial or far from obvious.

From a dispositionalist account, a proposition *P* is possibly true if and only if there is a plurality *xx* of actual beings with iterated causal powers to bring about the truth of *P*. Iterated causal powers are understood as those which generate something (with any finite number of iterations allowed).³⁹

Given how metaphysical possibility is defined through dispositionalism, it is true by definition that, if a being is possibly caused, there are actual beings capable of initiating a causal chain that leads to its intended existence. The argument of §4.1 is then at home within a dispositionalist account of metaphysical possibility. But what of other accounts?

Let us start with modal realism as presented by Lewis (1986). Within modal realism, a proposition *P* is possibly true if and only if it is true in some possible world. Possible worlds

³⁹ The terminology of ‘iterated causal powers’ is inspired by Vetter (2015).

are maximal sums of spatiotemporally-related beings such that, for every way the world could have been, there is a possible world that is that way. Furthermore, possible worlds are causally isolated. One apparent problem of modal realism is that it leaves us in no position to know what is or is not possible.⁴⁰ How could we assert that a certain proposition *P* that is false in the actual world is possibly true? To do so, we would need good reasons to believe that there is some possible world where *P* is true. Given that we cannot have any causal contact with other possible worlds, we are forced to rely on conceivability and logical consistency as guides to metaphysical possibility. If so, I see no reason why one should deny, under modal realism, the validity of the construction procedure used in §4.2 to build a possible causal sequence that leads to the existence of an actual being that was supposed as neither dependent nor independent. It seems that the extremely wide extent of metaphysical possibilities under modal realism provides ample resources with which to secure the validity of my argument for premise (b).

Regarding essentialist accounts of possibility as extracted from Fine (1995), a proposition *P* is possibly true if and only if it is compatible with the essences of all beings, actual and merely possible, taken collectively. You should not be surprised if I tell you that I believe essentialist accounts of possibility to be on a par with modal realism in terms of judging what is metaphysically possible. How would one be sure that a proposition is compatible with the essences of all beings? Again, it appears that, within modal essentialism, the best we can do is guide our judgments of metaphysical possibility with considerations of logical consistency and conceivability. Given that these considerations, as far as I can see, do not rule out the asserted possibilities in my argument for (b), I conclude that there is nothing in modal essentialism that threatens the soundness of my modal argument for OR.

⁴⁰ See Richards (1975).

I conclude that one can be a modal realist, an essentialist, or a dispositionalist about metaphysical possibility and find no fault in my modal reasoning to support OR.

One objection could be that I have, at most, only justified suspending judgment on the validity of the reasoning in favour of (b). For all we know, within modal realism or essentialism, it may or may not be possible to build the causal chain *S* that I relied on in deriving a contradiction from the supposition that there is a being that is neither dependent nor independent. Therefore, only modal dispositionalism has the resources for motivating one to move from suspending judgment to favouring my modal argument for OR.

Given my belief that there are good reasons to prefer a dispositionalist account of possibility over realist and essentialist rivals, I will grant, for the sake of argument, that my argument for OR is successful only within a dispositionalist conception of possibility.⁴¹

Once this concession is made, my argument can expect more serious trouble. Pruss (2006) argued that dispositionalism about metaphysical possibility entails a strong version of the PSR according to which all contingently true propositions have a sufficient reason for their truth. As stated earlier in this section, the reliance of my modal argument on an account of possibility that entails a strong PSR reduces the project of providing the said argument as a motivation to accept OR to ashes.

How does Pruss proceed to derive the PSR from a dispositionalist account of possibility? His argument can be presented as follows:

Suppose, for *reductio*, that there is a true contingent proposition *P* such that there is no causal explanation of its truth. Then,

⁴¹ For arguments in favour of modal dispositionalism, refer to Borghini and Williams (2008) and Vetter (2015).

- (h) The true proposition P^* : " P and there is no causal explanation of the truth of P " as contingent (this follows from the contingency of a conjunction whose conjuncts include some contingent proposition).
- (i) There is a possible world W , accessible from the actual world, where P^* is false (from (h) and the definition of a contingent proposition).
- (j) P^* is possible at W (premise, Brouwer axiom: what is actual is necessarily possible).
- (k) There is a plurality of beings in W with iterated causal powers to cause the truth of P^* (from the definition of a possible proposition under a dispositionalist account of modality).
- (l) There is a plurality of beings in W with iterated causal powers to lead to the truth of P having a causal explanation and that there is no causal explanation for the truth of P (from (k) and the conjunction-distributivity of causal explanation: contradiction).

Pruss then concludes that the starting hypothesis is false, meaning that all contingently true positions have a sufficient (causal) explanation.

If one adopts a dispositionalist account of possibility and accepts the Brouwer axiom of modal logic, objecting to Pruss's argument can only target the inference of (l) from (k) that relies on the conjunction-distributivity of causal explanation:

Conjunction-distributivity of causal explanation (CDCE): For any propositions P , Q , and R , if P causally explains the conjunction $Q \& R$, then P causally explains Q and P causally explains R .

While the CDCE might have some initial appeal, it is plausibly false on close scrutiny. Let me provide a counterexample to CDCE. Suppose that there is contingency in the world, as seen in §2, it is highly plausible to suppose that, if there is contingency in the world, there are

some contingent propositions whose truth lacks a causal explanation. For definiteness, let us suppose that libertarian free choice is possible, where a choice is free in the libertarian sense if it is contingent and lacks any causal explanation (i.e., it is literally spontaneous).⁴²

Suppose then that I have the privilege of enjoying libertarian free will in the actual world and that I am a contingent being. Let us then assume that I freely chose yesterday to have pizza for lunch, and consider the following propositions *Q*: 'I chose yesterday to have pizza for lunch' and *R*: 'there is no causal explanation from my choice to have pizza for lunch yesterday'. The conjunction *Q & R* is a contingent truth, and thus possibly false.

Let *W* be a world where the conjunction *Q & R* is false. Taking for granted that the Brouwer axiom of modal logic applies to metaphysical modality and under a dispositionalist account of possibility, *Q & R* is possible in *W*, meaning that there is a plurality *xx* of beings in that world with iterated causal powers to yield the truth of *Q & R*.

Assume that I exist in *W* and that, until the relevant moment, the causal evolution of the world does not exclude my choice to have pizza for lunch. It is then within my power, at *W*, to have freely chosen to have pizza for lunch yesterday, exercising a causal power that I have, the power of making a free choice, to bring about the truth of *Q* and that of *Q & R* without causally bringing about *R*.

If I do not exist in *W*, my existence is still possible and, in modal dispositionalism, there are beings with iterated causal powers to bring me to existence with my power to make free choices, in which case I could still have chosen as I actually did and make *Q & R* true without causally bringing about *R*.

⁴² For those who think that libertarian free choice is impossible, they are free to substitute the free choice in my example with the occurrence of their favourite type of objectively random quantum event or any other example of an unexplained contingent proposition.

In light of the above, conjunctions involving propositions reporting the occurrence of uncaused events provide counterexamples to the CDCE.

To save the CDCE while preserving his argument, Pruss cannot simply deny the existence of unexplained contingent truths because, in so doing, he would already be granting the truth of the PSR that is the conclusion of his argument.⁴³

Therefore, one can be a dispositionalist about possibility and accept my modal argument for OR without committing to a strong version of the PSR. Even if modal dispositionalism is an indispensable ingredient of my modal argument for OR, it does not require a commitment to a strong PSR that would render my argument superfluous and untenable.

6. Conclusion

Within this paper, I argued that one can accept Ontological Rationalism (OR) on principled grounds. Those grounds need not be based on a commitment to the Principle of Sufficient Reason (PSR) in its full generality.

I take the arguments of §2 to strongly motivate the conclusion that, if there is contingency in the world, then there is brute unexplainable contingency. If so, unrestricted versions of the PSR, which are incompatible to brute unexplainable contingency, are fatally flawed. One is therefore advised to find other grounds for justifying a commitment to OR.

Pruss's (2004) Restricted Principle of Sufficient Reason (RPSR) is a straightforward restriction of the PSR that is not beset by its fundamental issues. I argued that it provides good ground upon which to base one's commitment to OR.

⁴³ For other reasons to reject the CDCE, refer to the interesting discussion in Guigon (2011).

Furthermore, I provided a direct modal argument for OR that is especially at home within a dispositionalist account of metaphysical possibility. I advanced that the argument's appeal is not lost under essentialist and realist theories of metaphysical possibility.

A main objection to my direct argument for OR is that, if the argument can only ultimately be run under a dispositionalist account of modality, a commitment to its soundness would be untenable given that dispositionalism about modality entails the fatally-flawed unrestricted PSR. I addressed this concern by showing that a commitment to a dispositionalist theory of modality does not entail the PSR. In so doing, I argued against the conjunction-distributivity of causal explanation that is needed to derive the PSR from dispositionalist accounts of modality.

Accordingly, I conclude that one is justified in seeking an explanation for the existence of every being given that such an explanation actually exists. Whenever somebody endeavours to explain the existence of something, this cannot be, in principle, to no avail. This applies to everything, from the most fundamental physical particles to the entire physical universe.

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Paper 4

Fundamentality and Essential Existence

1. The role of fundamentalia

The question of fundamentality has attracted broad interest in recent metaphysics. Fundamentality is usually considered to play two crucial roles, as summarized by Tahko (2018):

We can identify two key tasks for the notion of fundamentality. The first is to capture the idea that there is a foundation of being, which consists of independent entities. The second is to capture the idea that the fundamental entities constitute a complete basis that all else depends on. (Tahko, 2018)

Different notions of dependence lead to different characterisations of fundamentality that are largely in agreement regarding the independent existence of fundamentalia. In what follows, I do not argue for or against the traditional understanding of foundationalism as, for our purposes, there are fundamental beings that explain the existence of all other beings. My aim is rather to investigate which characterisations of fundamentalia ought to be endorsed by the foundationalist who postulates them to explain the existence of derivative beings.

This section is thus dedicated to considering how the role of fundamentalia as ultimate ontological explanations ought to be characterised, before moving to what consequences on the number and nature of fundamentalia can be drawn from this characterisation of their theoretical role in the subsequent section. Let us then begin by trying to shed more light on the role of ultimate explanations of fundamentalia.

If the postulation of fundamentalia is supposed to achieve an explanatory target – namely that of explaining the existence of derivative beings and providing a foundation for the hierarchical structure of reality, mediated by dependence relations – fundamentalia ought to be a proper terminus of the explanation for which they are postulated.

Fundamentalia can be such a terminus for ontological inquiry if their existence is not an arbitrary stopping point that is merely proposed so as to fulfil the explanatory desire of making sense of reality in its deepest aspects. What should then be true about fundamentalia so that their postulation escapes arbitrariness and offers a principled terminus of ontological explanation?

To answer this question, it may be instructive to consider the shortcomings of the explanatory hypothesis in the following passage from Hawking (1989):

A well-known scientist (some say it was Bertrand Russell) once gave a public lecture on astronomy. He described how the earth orbits around the sun and how the sun, in turn, orbits around the center of a vast collection of stars called our galaxy. At the end of the lecture, a little old lady at the back of the room got up and said: 'What you have told us is rubbish. The world is really a flat plate supported on the back of a giant tortoise'. The scientist gave a superior smile before replying, 'What is the tortoise standing on?'. (Hawking, 1989, p. 1)

The scientist's question is meant to make his interlocutor acknowledge that her postulated explanation of the earth's standing is deficient. The deficiency is that the postulated explanans, i.e. the tortoise, is itself a legitimate target for the same explanatory demand that it is postulated to address. If the tortoise is itself in need of something to support it, what is the point of positing its existence? Might this deficiency be eliminated by supposing that the

standing of the tortoise is a brute fact that has no explanation? Well, given that one might have said the same thing about the earth, thus saving the extra ontological cost of positing the existence of the tortoise, the answer would be 'no'.

While this 'tortoise theory' might seem silly and unworthy of attention, another familiar example will help show that the lessons to be drawn are general and independent from any specific explanatory context. The example is that of positing God's existence as an explanation of the existence of all other beings. If the existence of God can be a legitimate target of some kind of the 'who created God?' question, then God is, I am sorry to say, like the tortoise in being a superfluous posit that carries an ontological cost without an explanatory advantage. It is of course common among theists to insist that God's existence is necessary, meaning that the question of 'who created God?' is an illegitimate one. A subtle point here is to observe that, if God's necessity is brute in the sense of lacking any sort of explanation, then we are again in the situation where one might have said the same thing about the universe, i.e. that the existence of the universe is a brute necessity which saves the ontological cost of positing God's existence without being worse off from an explanatory perspective.⁴⁴

The lesson to draw from these two examples is that fundamentalia can play their role of explanatory termini only if there is a satisfactory reason for their lack of ontological explanation. What should that satisfactory reason be?

My view on the matter is that the existence of fundamentalia should not be a brute fact that is independent of what the fundamentalia are, i.e. independent of the essences of

⁴⁴ The dialectic is, of course, more complex. Theists give their reasons to hold that the universe exists contingently. See Oppy (2013) for an implementation of the outlined parity strategy in the context of the cosmological argument for the existence of God.

fundamentalialia. In order to be proper termini of ontological explanations, fundamentalialia should exist in virtue of what they are, in virtue of their essences. Indeed, if fundamentalialia are neutral regarding their existence, the existence of fundamentalialia would not escape the vicious arbitrariness of the previously-considered examples. That is, the existence of fundamentalialia would not hold in virtue of what they are, nor be determined by anything else, thus undermining the explanatory advantage for which they are postulated. On the contrary, if the fundamentalialia exist in virtue of what they are, there would be something about them that explains their existence without recourse to beings other than themselves.

One might question the efficacy of this move as it seems to push the problem one level up from the existence of fundamentalialia to their essences. I disagree! It would be legitimate to ask why the fundamentalialia exist if their existence was not in virtue of what they are. In that case, there would be nothing about the fundamentalialia that favours their existence over their non-existence. However, if the fundamentalialia exist in virtue of what they are, in virtue of their essences, it would not be as legitimate to further ask why they have their essences or, more precisely, why the fundamentalialia are what they are. This would be like asking why water is H₂O. An informative and ultimate explanation of this fact would be that it is of the essence of water to be H₂O. There is nothing more to ask or explain. The essentiality of the existence of the fundamentalialia renders it immune from being a legitimate target for further explanation.⁴⁵

In summary, if the fundamentalialia are to play the role for which they are postulated, they must be independent beings that exist in virtue of what they are, in virtue of their essences. In what follows, I explore this conception of fundamental existence to argue that all

⁴⁵ See Glazier (2017) for a defence of the ultimacy of essentialist explanations.

fundamentalia must have the same essence. I take this conclusion to be a strong motivation for believing that there cannot be more than one fundamental being.

2. The essences of fundamentalia

Based on the argument of the previous section, I here mean by a fundamental being one that exists in virtue of what it is, in virtue of its essence, independently of other beings.

Some might think that I have already proved the existence of such a being. Have I not just said that it is of the essence of a fundamental being to exist, from which it follows that a fundamental being does exist? Well, not quite so. To deduce the actual existence of a fundamental being, one needs to hold that the existence of such a being is metaphysically possible. The conceptual definition of a fundamental being is insufficient to deduce its existence.⁴⁶ This is why the recent literature on theistic ontological arguments is so heavily centred around justifying the metaphysical possibility of God's existence to bridge the gap between God's conceptual definition and actual existence.⁴⁷

Now that the worry of bringing fundamental beings into existence by mere fiat is dispelled, I would like to argue that all fundamental beings must share the same essence. If so, concluding that there cannot be more than one fundamental being would be within reach.

In the context of my argument, the following definitions apply. A fundamental property is one whose instantiation does not depend on that of any other property of which it is distinct. Two properties are distinct if it is possible for some being to instantiate one of them without the other. Some properties are essentially tied if and only if it is true in virtue of the essence of each of them that it is instantiated by some being only if that being instantiates

⁴⁶ I am speaking here about the definition of the concept of a fundamental being and not about the 'real' definition of a fundamental being, which is its essence in the metaphysically relevant sense.

⁴⁷ For an analysis of the role of a possibility premise in modal ontological arguments, see Rasmussen (2018).

each of the others (it is worth noting that essentially-tied properties are equivalent in the sense that a being instantiates one of these properties if and only if it instantiates each of the others). Finally, independent existence is the property of existing independently of other beings.

The argument for the thesis that fundamental beings must have the same essence can be presented as follows.

1. If it is necessary that some fundamental properties are co-instantiated, then these properties are essentially tied (premise).
2. The essential properties of a fundamental being are fundamental properties (premise).
3. It is necessary that the essential properties of a fundamental being are co-instantiated (premise).
4. The essential properties of a fundamental being are essentially tied (from 1, 2 and 3).
5. Independent existence is an essential property of every fundamental being (premise).
6. The essential properties of every fundamental being are essentially tied to independent existence (from 4 and 5).

Therefore,

7. All fundamental beings have the same essential properties (from 6).^{48,49}

⁴⁸ To be more precise, all the numbered propositions of this argument, except the first, should have been preceded by the qualification 'if it is possible that there are fundamental beings'. One might accept this argument but nonetheless hold, for other reasons, that it is impossible for there to be fundamental beings in the sense employed in this article.

⁴⁹ The derivation of (7) from (6) can proceed as follows. Assume that there are two fundamental beings *a* and *b*. Let us further assume that *b* has an essential property *E* that *a* does not have essentially. Let us denote by *I* the property of independent existence. By (6) it is of the essence of *I* that any being that is *I* is also *E*. Now, *a* is essentially *I* and therefore is *E*. Furthermore, given that it is of the essence of an essential property of *a* that it is *E*, *a* is essentially *E*. This contradicts the starting assumption that *a* is not essentially *E* and allows us to

Let us then turn to the justification of the argument's premises.

Premise (1) can be motivated on the basis of a widely-accepted free re-combinability principle that applies to fundamental properties.⁵⁰ As Schaffer (2010b) argued, failures of free re-combinability at the fundamental level, such as necessary co-instantiation, require explanation. Two explanations are possible. First, the properties which are not freely re-combinable are both dependent on more fundamental properties. Second, the said properties are not wholly distinct. The first explanation does not apply to fundamental properties. This leaves us with the second explanation, that fundamental properties that are not freely re-combinable are not wholly distinct. Now, fundamental properties are distinct if they are not essentially tied. This is so given that the identities of essentially-tied properties are intertwined. The reciprocal dependence of the fundamental properties is the only kind of dependence that precludes the distinctness of said fundamental properties, in the sense used in the current argument. If this is correct, premise (1) is well justified.

Given that fundamental beings exist independently and instantiate their essential properties when existing, the instantiation of essential properties of fundamental beings does not depend on that of other properties (of which they are distinct). It follows that the essential properties of fundamental beings are fundamental properties as expressed by premise (2). It is worth noting that I am assuming here, as many would find plausible, that the instantiation of the essential properties of a fundamental being cannot depend on certain accidental properties of the said being. I take essential properties to be prior to accidental

conclude, given that E was chosen randomly, that all the essential properties of b are essential properties of a . The same argument can be run against any supposed essential property of a that is not an essential property of b . In conclusion, a and b have the same essential properties. Given that a and b were randomly selected, the result can be generalised to yield (7).

⁵⁰ For a critique of the arguments commonly given for free re-combinability at the fundamental level, see Wang (2016).

properties in the sense that the former constrain the latter, but not the other way around.⁵¹

The dependence of x 's instantiation of one of its essential properties E on x 's instantiation of an accidental property A would violate the priority of essential properties over accidental ones.

A fundamental being, existing essentially, is such that its existence is, if possible at all, necessary. Simply put, if it is possible that a fundamental being exists, then it must do so necessarily.⁵² Given that a fundamental being co-instantiates all of its essential properties whenever it exists, it follows that the essential properties of a possible fundamental being are necessarily co-instantiated. This justifies premise (3).

The final premise, (5), is merely definitional. This concludes the defence of the argument's premises.

So far, I have argued that fundamental beings must have the same essence. Can the same essence be shared by distinct beings? To answer this question, we must first consider what essences are. One view holds that the essence of a being x is 'what x is'. Knowing the essence of x is knowing what x , this specific individual being, is. As Lowe (2018, p. 16) put it, 'X's essence is the very identity of X.'⁵³ If essences are tied to specific identities, a given

⁵¹ I mean here that a being cannot have an accidental property that is incompatible with its essence. For instance, if it is essential to an electron that it is negatively charged, then this electron cannot be positively charged.

⁵² It is worth clarifying that, for all that I have said, there is nothing that entails that all necessary beings are fundamental. For instance, nothing I have said precludes the possibility that the existence of some non-fundamental beings is grounded in the existence of some fundamental beings. If grounding is, as it is widely believed, necessitating, it follows that the existence of such non-fundamental beings is necessary. In particular, given that, plausibly, there are abstract objects with different essences, e.g., numbers, my arguments to the effect that there cannot be more than one fundamental being show that at most one of these abstract beings can be fundamental. However, my arguments are compatible with the necessary existence of abstract objects.

⁵³ Essence can also be understood as real definition. See Rosen (2015) for an overview of this conception of essence.

essence cannot be shared by more than one being.⁵⁴ It thus follows that there can be at most one fundamental being given that all fundamental beings must have the same essence.

If essences are general and can be had by more than one being, the principle of the identity of indiscernibles becomes attractive for precluding cases of primitive identity that are more effectively handled by individual essences. I now argue that, even if there are none but general essences, considerations related to the principle of the identity of indiscernibles and to the instantiation of accidental properties are sufficient to conclude that there cannot be more than one fundamental being.

The argument runs as follows. Suppose that there are two distinct fundamental beings. From the principle of the identity of indiscernibles, it follows that both differ in some of their properties. As previously argued, all fundamental beings must share the same essence. The properties that differentiate the two cannot then be essential, but must be accidental. At this stage, it is crucial to observe that, had the fundamental beings lacked the accidental properties that differentiate them, the identity of indiscernibles entails that at most one of them would exist. It follows that the existence of at least one of the two beings depends on its possession of some accidental properties. This last claim is absurd because it entails the contradictory claim that the considered fundamental being does not exist *solely* in virtue of what it is, in virtue of its essence. A being that exists essentially would exist *regardless* and, particularly, no matter what accidental properties it has (and no matter what accidental properties other beings have).

⁵⁴ For arguments in favour of individual essences, see Roca-Royes (2011) §3 and Zagzebski (1989) §2.

The principle of the identity of indiscernibles – which is indispensable for this argument – is somewhat controversial. It would be helpful to clarify which version of that principle is presupposed in the argument and to shed some light on its controversy.

The principle of the identity of indiscernibles, in its most generic form, can be stated as the claim that no distinct beings can share all of their properties. This general principle has varying degrees of strength depending on the range of properties to which it applies. The principle can be trivially and necessarily true if the range of properties that it applies to is unrestricted, including those that entail particular identities (e.g., the property of being identical with *x* where *x* is some particular being). Resorting to such identity-fixing properties to vindicate the principle of the identity of indiscernibles would amount, dialectically, to having recourse to individual essences to argue for the impossibility of the existence of more than one fundamental being. Given that I have already considered the support that individual essences can give to that conclusion, I am happy to base the argument on a stronger version of the principle of the identity of indiscernibles.

The version that I use has been expressed by Wreen (2015) thusly:

The identity of indiscernibles (IOI): If ‘two’ objects share all their purely qualitative properties, then they are really one. (Wreen, 2015, p. 36)

Following Wreen (2015), purely qualitative properties are those that do not entail the existence of any particular, definite, being. Purely qualitative properties can be either non-relational (intrinsic) or relational (extrinsic).

The metaphysical necessity of this principle, required for the validity of the argument under consideration, has been challenged based on alleged cases of perfectly-symmetric possible

worlds or nearly perfectly-symmetric possible worlds, conjoined with a principle of modal continuity. Black (1952) designed a case of possible perfect similarity in the purely qualitative profile of two material spheres in a world that contains nothing other than said spheres, while Adams (1979) designed one in which two persons that are alike in every purely qualitative aspect except that one has once a dream whose content slightly differs from that of the other person during the same time. Black's (1952) case takes as a starting assumption the possibility of perfect indiscernibility to give a counterexample to the metaphysical necessity of IOI. Adams (1979) used a principle of modal continuity to argue that the assumption of the possibility of almost indiscernible beings – which seems less controversial than Black's starting assumption – entails the possibility of indiscernible beings.

A possible reply to these challenges to IOI is that the possibilities at the heart of Black and Adams's arguments can be rejected. Both rely on conceivability and logical consistency to infer the metaphysical possibility of indiscernibles, or almost indiscernibles. One might doubt whether conceivability is always a reliable guide to metaphysical possibility. That said, it would be a rather extreme move to dismiss their arguments on the sole ground that they rely on conceivability to infer metaphysical possibility. Delving into the intricacies of the conceivability-possibility link to justify the rejection of Black and Adams's intuitions would take us far afield. For those siding with Black and Adams, the next section contains an argument that does not rely on the IOI.

In sum, this section's argument motivated the claim that fundamental beings must share the same essence. If all essences are individual ones that cannot be shared by different beings, it follows that there cannot be more than one fundamental being. The same conclusion

follows if one accepts the principle of the IOI even on the supposition that the same essence can be shared by multiple beings.

3. Another argument

In this section, I defend another argument for the conclusion that there cannot be more than one fundamental being. This argument does not rely on the claim that all fundamental beings must share the same essence, but is instead motivated by the goal of uncovering an interesting feature about the composition of the essences of fundamental beings, namely that they are exclusively constituted by essentially-tied properties. Moreover, this additional argument does not use the controversial principle of the IOI, as seen in the previous section. The argument runs as follows:

8. It is not true in virtue of the essence of a fundamental being that there are other beings (premise).
9. If it is true in virtue of the essence of an essential property *P* of a fundamental being *x* that *x* is *P* only if there are other beings that are *P*, then it is true in virtue of the essence of *x* that there are other beings (premise).
10. It is compatible with the essence of any essential property of a fundamental being that it is had by one being at most (from 8 and 9).
11. If it is compatible with the essence of an essential property *P* of a fundamental being that it is had only by one being at most, it is possible that *P* is had by only one being at most (premise).
12. Independent existence is an essential property of every fundamental being (premise).
13. It is possible that there is at most one fundamental being (from 10, 11 and 12).

14. The existence of a fundamental being is necessary if possible at all (premise).

Therefore,

15. There cannot be more than one fundamental being (from 13 and 14).⁵⁵

Premise (12) is shared with the argument of the previous section and has already been motivated. Premise (14) has been justified when defending (3). Premises (8), (9), and (11) are therefore those in need of justification.

Premise (8) is justified by the independent existence of fundamental beings. A being whose essence requires the existence of other beings is an ontologically-dependent being.

Premise (9) can be justified as follows. Consider a fundamental being x that is essentially P . It is true in virtue of the essence of x that Px . If true, then, in virtue of the essence of P that a being is P only if there are other beings that are P , it would follow that it is true in the virtue of the essence of x , being essentially P , that there are other beings (that are P).

Now to Premise (11). At the level of fundamental properties that are the essential properties of fundamental beings, the only modal constraints on the patterns of instantiation of these properties are those that hold in virtue of their essences. This is again justified by considerations of modal freedom at the fundamental level. Therefore, if it is compatible with the essence of a fundamental property that it is instantiated by one being at most, then it is metaphysically possible that the said property is had by one being at most, as premise (11) states.

⁵⁵ Here is how one derives (15) from (13) and (14): assume, for *reductio*, that it is possible that there is more than one fundamental being. For definiteness, assume that it is possible that there are exactly two such beings, x and y . By (14), both x and y are necessary beings. It follows then that it is necessary that there is more than one fundamental being (because it is necessary that both x and y exist). However, by (13), it is possible that there is at most one fundamental being. Contradiction! Therefore, the starting assumption, that it is possible that there is more than one fundamental being, must be rejected, and (15) follows.

4. Implications for foundationalist hypotheses

Let us now consider the implications of the reasoning deployed in the previous sections for certain popular or widely-discussed hypotheses regarding the nature of plausible candidates for the role of fundamental beings.

The first hypothesis to consider is that of Physical Atomism (PA), according to which there are fundamental physical simples, namely atoms, that are mereologically simple. Kim (1993) provided the following version of PA:

The Cartesian model of a bifurcated world has been replaced by that of a layered world, a hierarchically stratified structure of "levels" or "orders" of entities and their characteristic properties. It is generally thought that there is a bottom level, one consisting of whatever microphysics is going to tell us are the most basic physical particles out of which all matter is composed (electrons, neutrons, quarks, or whatever). (Kim, 1993, p. 337)

Under PA, every being that does not belong to this fundamental level of physical atoms is ontologically dependent on beings at that fundamental level. PA is a popular thesis about fundamentality given how simply it directly fits within a naturalistic metaphysics based on the assumptions that there are none but natural entities and that natural sciences (physics in particular) are our best guide to the fundamental structure of reality.

If the reasoning detailed in the previous sections is correct, an endorsement of PA with an explanatory objective would require holding that there is exactly one physical atom on which all other beings depend. This is because the fundamental level that PA postulates must be populated by independent beings that exist essentially and if, as I have argued, there cannot

be more than one such being, a proponent of PA must be committed to the existence of a unique physical atom on which all other beings depend.

Assuming the conclusion of the previous sections, this last consequence of PA speaks against some versions of PA. For instance, if the atoms of PA are supposed to be particles in four-dimensional space-time, it seems that our current best scientific picture of such physical entities entails that there are multiple kinds of fundamental particles, and that all entities belonging to this fundamental level can be created and destroyed. None of them is then a candidate for essential existence and, setting this issue aside, their multitude is incompatible with the conclusion that there cannot be more than one fundamental being.

There are, however, certain versions of PA that can gain support from the arguments of the present paper. I have in mind Albert's (1996) realist interpretation of Bohmian mechanics:

On Bohm's theory, for example, the world will consist of exactly two physical objects.

One of those is the universal wave function and the other is the universal particle.

And the story of the world consists, in its entirety, of a continuous succession of changes of the shape of the former and a continuous succession of changes in the position of the latter. (Albert, 1996, p. 278)

The universal wave function, being a physical field in Albert's proposal, does not seem to qualify for essential independence. As Albert explained, 'fields [...] are the sorts of objects whose states one specifies by specifying the values of some set of numbers at every point in the space where they live' (1996, p. 278). Fields are thus entities that are defined by reference to other entities. Their essences do not exhibit the self-containment required for the ontological independence of fundamental entities. However, it is not obvious that the

essence of the universal point is not self-contained. It seems then *prima facie* compatible with my arguments that the universal point is the unique, essentially-existing fundamental being. One can then see my arguments as providing indirect support to Albert's position in the metaphysics of quantum mechanics.

The second foundationalist thesis that I would like to address is that of Cosmic Priority Monism (CPM), according to which the cosmos, the mereological sum of all beings, is a fundamental being on which all others ontologically depend. CPM has been influentially defended by Schaffer (2010a) and has received wide attention in recent literature.

CPM, in positing one fundamental being, does not stand in conflict to my arguments that there cannot be more than one fundamental being that explains the existence of all other derivative beings. However, the fundamental being posited by CPM seems a somewhat implausible candidate for essential existence that is required, if I am right, for fundamentalia to play their role in explaining the existence of derivative beings.

The reason is similar to that advanced in the case of the universal wave function. The real definition of the cosmos, a specification of its essence, cannot be had without reference to other beings, namely its parts (the cosmos is, *by definition*, a mereological sum). The essence of the cosmos, as that of the universal wave function, does not exhibit the self-containment required for the ontological independence of fundamental entities.

Moreover, Trogon (2017) suggested that CPM is a more plausible thesis if it is taken to be metaphysically contingent. He argued that there are notions of metaphysical necessity that allow for the contingency of CPM, and that some of the thesis' objections are undercut when CPM is taken to be contingently, rather than necessarily, true. If CPM is indeed best understood as a contingently true thesis, this entails that the (actual) cosmos is not an

essential being. Were CPM only contingently true, the cosmos would not be independent in every possible world and would therefore not be an essential being.

It is worth noting that, despite being priority monists, both Schaffer and I disagree about a constraint that he imposes on plausible candidates for fundamentality. Schaffer (2010a) required what he termed the *Covering* condition, which is that the mereological sum of fundamental beings is the entire cosmos. Under priority monism, the notion that there is exactly one fundamental being, *Covering* entails that the unique fundamental being is the cosmos. Schaffer motivated *Covering* through a *Completeness* requirement that fundamental beings must satisfy. According to Schaffer, 'a plurality of entities is complete if and only if duplicating all these entities, while preserving their fundamental relations, metaphysically suffices to duplicate the cosmos and its content' (2010a, p. 39). I see no reason to require that fundamental beings satisfy Schaffer's *Completeness*, with its mereological ideology. Fundamental beings can explain the existence of derivative beings simply by standing with them in certain explanatory relations. For example, take a world where one fundamental being, God, exists. Assume that there is one derivative being, Adam, in said world and that Adam exists because God created him. In that world, the existence of all derivative beings is explained by their standing in a certain explanatory relation with fundamental beings. This is so without *Completeness*.

It could be that I have misunderstood Schaffer's explanatory target and, consequently, failed to appreciate the appeal of *Completeness*. Nevertheless, if fundamentality and its explanatory role are understood as stated in the present paper, then there is no urge to require the mereological constraints on fundamental beings that led Schaffer to CPM.

The foregoing discussion, building on the arguments of the previous sections and the resulting characterisation of fundamental beings, motivates the view that CPM is not a plausible foundationalist thesis if advanced, at least partially, to explain the existence of non-fundamental beings. The fundamental being of CPM does not qualify for essential existence. Matters are left open for PA, which has versions that seem compatible with the conclusions of my arguments. It should be noted that some non-naturalist foundationalist theses, such as monotheism, of non-trinitarian foundation, are also compatible with the present arguments.

Perhaps the lesson we can draw from these observations is that any plausible explanatory foundationalist thesis has to posit only one fundamental being whose essence is self-contained. At the very least, I hope to have shown that there is tension between holding that fundamentalia play an explanatory role, that fundamentalia are freely re-combinable, and that fundamentalia are multiple or mereologically complex beings.

5. Conclusion

I motivated the view that a commitment to a fundamental layer of reality ought to lead to a commitment to the existence of essential beings, where an essential being is one that exists in virtue of what it is, in virtue of its essence, independently of other beings.

I provided two arguments for the conclusion that there cannot be more than one fundamental being. In the course of developing these arguments, some distinctive aspects of essential existence were highlighted.

Building on these arguments and the emerging characterisation of independent existence, I argued that CPM and some widely-endorsed forms of PA are not plausible foundationalist

theses. My conclusion is that a plausible foundationalist thesis must posit a unique fundamental being whose identity is self-contained.

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Paper 5

A New Look at the Ontological Argument

1. The concept of God

Standard ontological arguments in the spirit of those defended by Anselm, Descartes, Gödel, or Plantinga have at their foundation a concept of God that has its roots in Perfect Being Theology (PBT). According to PBT, God is the greatest possible being or, to take Anselm's famous formulation, that than which no greater can be conceived.⁵⁶

It is by no means a given that ordinary people think of the greatest possible being or that than which no greater can be conceived when asked to define God. It seems that one is more likely to assume the layman notion of a personal creator with significant control over the happenings of the world. *Prima facie*, PBT's concept of God looks suspiciously like that of a philosopher's, a *recherché* definition that may not be entirely faithful to the ordinary meaning of the word 'God'. While this is not a reason to reject PBT in and of itself, one would prefer an ontological argument whose theological significance is more apparent than that of a PBT-based ontological argument.

Be that as it may, there are more serious difficulties that face PBT-based ontological arguments. In Paper 1, I presented several challenges to this class of arguments that I will mention briefly here. The first concerns the value commensurability assumption to which proponents of standard ontological arguments are committed.⁵⁷ I argued that friends of the ontological argument can meet the challenge but at a significant cost that impacts the cogency of their argument. The second challenge is the threat of the indefinite extensibility

⁵⁶ The reader is referred to Oppy (2020) for an introduction to ontological arguments and references of the related works of Anselm, Descartes, Gödel, and Plantinga.

⁵⁷ I use 'standard ontological arguments' as a synonym of 'PBT-based ontological arguments'.

of greatness to the coherence of the concept of the greatest possible being. The third relates to the difficulty that the ontological arguer faces in securing the uniqueness of the greatest possible being. The fourth concerns providing a well-motivated bridge principle that links value and existence, and allows proponents of PBT-based ontological arguments to deduce the actual existence of the greatest possible being. The fifth challenge presents a dilemma for friends of standard ontological arguments: either they abandon their argument and its underlying objective value assumption, or they allow the problem of evil to gain traction and dangerously threaten their argument's conclusion. The sixth challenge is that standard ontological arguments are not worth their price for the theist. To advance such arguments, theists weaken their overall worldview by commitments that can be avoided and that are made only to threaten theistic belief by the resulting evil-related problems.

I take these considerations to motivate the view that theists would do better to find another concept of God if they want to defend an ontological argument for His existence.⁵⁸ Given the unanimous convergence of the main classical and contemporary defenders of ontological arguments to PBT's concept, the prospects of advancing a respectable ontological argument that builds on an alternative concept of God might look unpromising.

However, there is no need to despair. One need only take the layman's words seriously. According to the layman, God is the creator of the world and has significant control over its events. One might express this idea by holding that God is a sovereign being. The concept of

⁵⁸ This is a prudential move rather than one motivated by the belief that PBT is an inadequate conception of God. If theists are able to advance cogent ontological arguments based on alternative concepts of God and if they can rescue PBT-based ontological arguments from the above mentioned challenges, all the better. If standard ontological arguments are fatally defeated, all is not lost. Ontological arguments based on alternative concepts of God can be appealed to for rescue. The arguments defended here should be seen as alternatives to, rather than competitors of, PBT-based ontological arguments.

a sovereign being seems to be a natural understanding of the concept of God, or at least a concept that is closer to ordinary use from that of PBT.⁵⁹

We must first clarify the concept of a sovereign being before using it as the starting point of an ontological argument. Sovereignty has two facets. The first is absolute ontological independence. Being sovereign requires self-sufficient existence in the sense that a sovereign being has to exist in virtue of what it is, in virtue of its essence, independently of other beings. A being that depends, or could depend, on other beings for its existence would not be sovereign. The second facet of sovereignty is absolute authority. A sovereign being has the maximal level of control over the happenings of the world.

Considering the traditional divine attributes, absolute authority can be equated with omnipotence. Although omnipotence has proved to be particularly difficult to analyse, one account of omnipotence can be built upon to acquire a better understanding of the absolute authority that is constitutive of sovereignty. Ross (1969, 1980) provided just such an account:

God is omnipotent in the sense that God's effective willing, or not willing, is *logically equivalent* to the obtaining, or not, of every contingent state of affairs that is not a state of God's own willing. S's willing is *effective* just in case there is no possible world where the choice is made by S and what S chooses does not obtain. (Ross, 1980, p. 614, emphasis in the original)

Through this account, assuming that there are contingent states of affairs, God fully determines which world among possible worlds is actual. This account does not leave room

⁵⁹ It is worth stressing that I do not take the concepts of a sovereign being and that of the greatest possible being to be incompatible. Indeed, my aim is to broaden theistic options for advancing ontological arguments for God's existence rather than to offer new options instead of others that should be abandoned.

to contingent states of affairs that are not states of God's own willing and whose obtaining is not completely determined by extrinsic factors. To many, it seems highly plausible to hold that there are such contingent states of affairs that defy Ross's analysis of omnipotence.

On the one hand, it is usually assumed that one of the main lessons of the recent advances in quantum mechanics is that there are physical states of affairs whose obtaining is objectively chancy. On the other hand, it is highly disputed whether humans have libertarian free will. If they do, they would be the ultimate sources of their states of willing. In order to avoid commitment to controversial views related to the interpretation of our best scientific theories and to the perennial debate about free will, I propose the following analysis of absolute authority that builds upon Ross's account.

Absolute authority: *A* has absolute authority if and only if for any possible world *W* and contingent state of affairs *S* that obtains in *W* and that is not a state of *A*'s own willing,

(a) *A* intentionally causes *S*.

Or

(b) *A* intentionally permits that *S* obtains and *A* has the power to prevent *S*'s obtaining.

This analysis of absolute authority is compatible with both undetermined physical states of affairs and acts of libertarian free will. For such states of affairs, a being with absolute authority knows about the considered state of affairs, and intentionally decides not to intervene and let the said state of affairs obtain, while retaining the power to prevent its obtaining. One can say that a being with absolute authority can veto the obtaining of contingent states of affairs, that it does not itself bring about intentionally, thus retaining full

control of the happenings of the world.⁶⁰ The absolute authority component of sovereignty is then faithful to the view that God has a wide-ranging control over the world.

What about a sovereign being's status as a first cause? While ontological independence guarantees that a sovereign being is uncaused, it is insufficient for ensuring that there are no beings whose causal histories do not terminate in the same sovereign being. One way to secure the sovereign being's first cause status is to advance a cosmological argument whose conclusion is that there is an independent being acting as a first cause, and to additionally argue that there cannot be more than one such being. If granted, it follows that the only possible independent being is a first cause. A sovereign being, if one exists, would be that independent being given that sovereignty, as said earlier, entails ontological independence that is tied to one specific identity.⁶¹

Proceeding this way has the advantage of making the most of ontological and cosmological reasoning in a unified and stronger case for the existence of God that neither standard nor traditional ontological or cosmological arguments, taken in isolation, are able to motivate. On the one hand, cosmological arguments can justify the existence of a first cause, but tend to remain silent about its nature. This makes cosmological arguments fall short of justifying the existence of God. On the other hand, ontological arguments can justify the existence of a being with great power and knowledge, but cannot do the same for the first cause status of this being to warrant its identification with God as traditionally conceived.

⁶⁰ The control of a sovereign being over the happenings of the world would not be full if it was not intentional. A being that is determined to act in a certain way has less control over what it does than a being that acts intentionally. This is why absolute authority requires the ability to act intentionally which, in turn, makes a sovereign being a person.

⁶¹ The ontological independence of a sovereign being and the impossibility of there being more than one independent being entail that there cannot be more than one sovereign being. It is then justified to substitute references to 'a given sovereign being' or 'some sovereign being' by references to 'the sovereign being'.

It seems then that building an ontological argument on the concept of a sovereign being has the potential to successfully combine the ontological and the cosmological arguments, which have long proceeded in isolation. The key to this unification resides in the ontological independence enjoyed by a sovereign being and a first cause.

In Papers 2, 3, and 4, I defended a cosmological argument whose conclusion is that there is a first cause that is an independent being, and further argued that there cannot be more than one such being. If this conclusion is granted, an ontological argument for the existence of a sovereign being would further strengthen the case for the existence of God.

In sum, I argue that the concept of a sovereign being is more faithful to the ordinary concept of God than that of the greatest possible being of PBT, whose use in an ontological argument is fraught with difficulties. It follows that the concept of a sovereign being can be a legitimate foundation for an ontological argument. After more solidly contextualising the concept of a sovereign being, I highlighted one of the main advantages of using this concept in an ontological argument. This advantage lies in the possibility of combining the ontological and cosmological arguments, thus yielding a stronger case for the existence of God that makes the most of the strengths of both arguments. In what follows, I focus upon defending the ontological component for this unified case for theism.

2. An argument with a possibility premise

Given the results of the previous section, the following argument for the existence of God can be outlined:

1. A god is a sovereign being (premise, definition of a god)
2. Every god is an independent being (from 1)

3. There cannot be more than one independent being (premise)
4. There cannot be more than one god (from 2 and 3)
5. If it is possible that there is a god, then a god exists necessarily (premise)
6. It is possible that there is a god (premise)
7. A god exists necessarily (from 5 and 6)

Therefore

8. There exists a unique god (from 4 and 7)

Premise (1) is definitional. It defines a god in the context of the current argument as a sovereign being. (2) is a mere consequence of the definition of sovereignty that entails independent existence. A sovereign being has complete and independent control over the happenings of the world. Given that the existence of a sovereign being is a necessary condition for its sovereign ruling of the world, the ontological dependence of such a being is incompatible with its sovereignty.

Premise (3) is a more substantial proposition that many may doubt. I dedicated Paper 4 to arguing for premise (3). I here rehearse only one of the arguments that I advanced to defend this premise. The reader is referred to Paper 4 for a more thorough case for premise (3).

The argument begins from the premise that it is not true in virtue of the essence of an independent being that other beings exist. One then observes that, if it were true in virtue of the essence of an essential property of an independent being that it is had by multiple beings, it would be true in virtue of the essence of that independent being that there are other beings. It would then follow that, for each essential property of an independent being,

it is possible that one being at most has that property. If we apply this result to ontological independence – that is, an essential property of every independent being – it follows that it is possible that there is one independent being at most. The last step in the argument consists of appealing to the distinctive feature of an independent being, which is that its existence is necessary if possible (this is in fact premise (5) of the current argument and to which we shall soon return). This distinctive feature of independent existence, together with the intermediate conclusion that it is possible that there is at most one independent being, entail the desired conclusion that there cannot be more than one independent being.

According to premise (5), the existence of a sovereign being is necessary if possible at all. The analysis of absolute authority in the previous section provides fairly obvious support for this premise. The kind of complete control that a sovereign being would enjoy over the happenings of *all possible worlds* if it existed in one of them guarantees that such a being would exist in every possible world if it existed at all.

Setting aside this straightforward route to the truth of premise (5), there is a further argument for this premise that is independent of the previous section's analysis of absolute authority. This argument builds on the independent existence of a sovereign being to reach the conclusion that the existence of such a being is either necessary or impossible.

This argument in favour of the claim that an independent being's existence would be necessary if possible rests on the principle that a being, whose existence is supposed possible, cannot fail to exist if and only if none of its existence conditions can fail to be satisfied. While this principle appears credible in its own right, it can be further motivated through its converse principle that the existence of a possible being is contingent if and only

if some of its existence conditions can fail to be satisfied. This latter principle can be justified by shedding light on the nature of the existence conditions of a given being.

Let us use a table as an example of a being. We can determine the conditions of the existence of a table by reflecting on what a table is, which is to say reflecting on its essence. For instance, a table being essentially a material object, such a being cannot exist in the absence of the matter from which it is made. There is, of course, nothing special about tables that allows us to discover the conditions of their existence by considering their essences. The point is fully general. The essences of beings give the existence conditions of those beings. These conditions can fail to be satisfied if they take the form of dependence relations that can fail to hold. This means that contingent beings are those which are essentially dependent and whose essential dependence relations can fail to hold. Let me introduce certain terminology to clarify the statement of this latter point that is intended to be an analysis of contingent existence.

Dependent being: x is a dependent being if and only if there exists some plurality of beings yy and a relation R , such that x is not one of the yy and that it is true in virtue of the essence of x that $xRzz$, for some zz among yy . In this case, we can say that x is dependent on yy and write $D(x,R,yy)$ to mean that x is dependent on its being R -related with some members of yy .

For example, assume that a dioxygen molecule is essentially composed of oxygen atoms.⁶² If we take yy to be the plurality of oxygen atoms and R to be the ‘composed of’ relation, we can say that it is true in virtue of the essence of a dioxygen molecule x that $xRzz$ for some zz

⁶² It seems plausible to suppose that a dioxygen molecule is essentially composed of *the two oxygen atoms* which constitute it. The thought is that a dioxygen molecule composed of other oxygen atoms would be a different molecule. This further supposition is unnecessary for the intended illustration.

among yy . A dioxygen molecule is a dependent being that essentially depends on oxygen atoms for its existence.

Essential compatibility: the obtaining of fact F is compatible with the essence of a plurality of beings xx if and only if it is not true in virtue of the essence of xx that F does not obtain.

As a matter of illustration, it is compatible with the essences of myself and my desk, taken together, that Hilary Clinton is elected US president. It is also compatible with my essence that I do not write the previous sentence.

Armed with the notions of a dependent being and that of essential compatibility, the following Essentialist Analysis of Contingent Existence (EACE) can now be given.

EACE: the existence of a possible being x is contingent if and only if x is a dependent being and for some yy and R such that $D(x, R, yy)$, it is compatible with the essence of yy that $xRzz$ does not obtain for any zz among yy .

The EACE should be accepted because it satisfies two desiderata for an analysis of contingent existence. The first is having an essentialist foundation. This is a desideratum for an analysis of contingent existence given that, as mentioned earlier, the existence conditions of beings are given by their essences and that contingent beings are those for which some of the existence conditions can fail to be satisfied. The second desideratum is its delivering a verdict that aligns with commonly-held intuitions regarding the contingent existence of many kinds of beings that one can consider (in other words, my claim is that the EACE matches the data constituted by commonly-held judgements about contingent existence). I take these considerations to be strong reasons for endorsing the EACE.

Returning to premise (5), it should be straightforward to note that the EACE guarantees that the existence of a possible independent being would be necessary given that such an independent being would lack essential dependence relations that can fail to hold. The support that the EACE enjoys is therefore a direct support for premise (5).

Let us now turn to premise (6), the argument's central proposition. Readers familiar with the literature on the ontological argument will recognise this as 'the possibility premise' upon which such modal ontological arguments as those of Hartshorne (1965), Malcolm (1960), and Plantinga (1974) are based.

Justifying premise (6) is an exercise in modal epistemology. Being justified in accepting the truth of the premise amounts to having a justification for a modal belief, the belief that the obtaining of a fact is a metaphysical possibility. The fact under consideration is an existential fact of the form 'some being of essence x exists'. How can we be justified in believing that a fact of this form can obtain?

The belief that 'some being of essence x exists' is a possible fact, whose obtaining is possible, is justified if and only if the essence involved in the said fact is coherent. 'There is a unicorn' is therefore a possible fact given that the essence 'unicorn' is coherent and does not involve any contradiction. However, 'there is a round square' is an impossible fact given its inherent incoherence.

If we apply this to the essence 'sovereign being', a coherent essence, the conclusion is that it is possible that there is a sovereign being, which is equivalent to premise (6).

One can cast doubt in the justification of premise (6) by considering the metaphysical possibility of there being no sovereign beings. If one can be at least as justified in holding

that it is possible that there are no sovereign beings as one is justified in believing premise (6), the presented ontological argument for the existence of a sovereign loses its appeal. This is so given that the premise that it is possible for there to be no sovereign beings, coupled with premise (5), entails that it is impossible that there is a sovereign being and, of course, that there is no sovereign being in the actual world.

Is the claim that it is possible that there are no sovereign beings as justified as premise (6)? This claim can be justified, while accepting premise (5), by justifying the claim that it is impossible for there to be sovereign beings. This last claim can be justified if sovereignty is incoherent, which is, I submit, a claim that enjoys a less favourable epistemological standing than the claim that sovereignty is coherent. We can surely comprehend the concept of sovereignty and engage in meaningful discourse about it. This is at least *prima facie* reason to hold that sovereignty is coherent, and consider that the burden of proof is on the opponent to show that sovereignty is incoherent and thus impossible to instantiate.

One could still object that acceptance of my account for the justification of the metaphysical possibility of existential facts of the form 'some being of essence x exists' is not enough to grant premise (6). This could be because sovereignty does not fully capture the essence of a sovereign being. The claim being that one can be justified in holding that a certain essence can be instantiated only if one has a full grasp of the said essence (and does not discern any incoherence in it). Why should one think that sovereignty does not fully capture the essence of a sovereign being? I submit that the most promising reason to substantiate this doubt is that sovereignty is partially defined in terms of what a sovereign being can do, i.e., having absolute authority as defined in the previous section. One can then worry that an essence,

being a definition of what a given being *is*, cannot involve claims about what that being can *do*.

To address this worry, I begin by noting that there are good reasons to hold that a certain disposition to act in a particular way under specific circumstances can be part of a being's essence. For instance, it is widely held that it is essential for electrons to be negatively charged, and that such a charge is essentially a disposition to repel other negatively-charged physical objects. The belief that electrons are essentially negatively charged is justified as the best explanation for the experimental data according to which all electrons always repel other negatively-charged objects under suitable circumstances. There are many such examples of well-justified beliefs about it being essential for some beings to act in a certain way.

Setting aside this strong consideration against the claim that what something can do cannot be part of its essence, the next section argues there to be good reasons to hold that what is fundamental for sovereignty is independent existence and that the absolute authority component of sovereignty is a consequence of independent existence. If so, the constitutive essence, to use Fine's (1995) terminology, of a sovereign being is fully captured by its independent existence, which fully concerns what an independent being is rather than what it can do. One could still doubt that independent existence can exhaust the essence of some being. If you have such a doubt, I invite you to consider Paper 4's arguments for the claim that independent existence and its necessary conditions exhaust the essence of an independent being.

There is a final objection to my justification of premise (6) that I would like to consider. The objection is that my claim that belief in the possible instantiation of a given essence is

justified by the coherence of said essence might be rejected if it is not licensed by the best account of modal knowledge.

When arguing for premise (6), I singled out a specific type of facts and suggested that justification of possibility beliefs related to facts of the considered type can be secured in a given way. Now, there could be a general account of uniform modal knowledge in the sense of giving a unified analysis for the justification of modal beliefs regardless of the type of facts, and that trumps other competing accounts of modal knowledge by exhibiting a better bartering of simplicity and compliance with widely-held modal intuitions. If it results that this best account of modal knowledge does not justify that coherence suffices for the possible instantiation of essences, my reason for endorsing premise (6) is undercut.

My response is that either there is no uniform best account of modal knowledge or that the best account is framed in essentialist terms with which my justification of premise (6) has a strong affinity. Regarding the former, I can maintain that, for the class of facts of interest for premise (6), justification of possibility claims is a matter of logical coherence. This is while remaining open that the justification of possibility claims for other classes of facts rests on considerations that transcend logical coherence. For the latter, my justification of premise (6) gets its strength from its affinity with the best account of modal knowledge.

While space limitations bar me from fully defending this line of response to the considered objection, I can instead sketch what I take to be a promising avenue for further elaboration. It seems to me plainly true that, whatever account of modal knowledge you prefer, forming a justified belief about the possibility of the obtaining of facts of the form 'some being of essence x exists' requires a grasp of the essence under consideration. Moreover, if you come to believe that the said essence is incoherent, your account of modal knowledge, on pain of

implausibility, must deliver the verdict that one is justified in taking the obtaining of the considered facts to be impossible. Accordingly, having a grasp of the essence under consideration and an assessment of its coherence are required to form justified beliefs about the possibility claims of interest. I claim that nothing more is needed. Anyone who claims that we need more than a sufficient grasp of a given essence x and an assessment of its coherence to form reliable beliefs about such possibilities has a burden of proof to motivate any further requirements for the justification of such modal beliefs.

Motivation for such further requirements can come from their being consequences of a best account of modal knowledge. I take it that proponents of accounts of modal knowledge that are not essentialist in their foundation would struggle to explain why we must resort to essentialist considerations to justify modal beliefs about some kind of facts if this is not generally the case. Proponents of essentialist accounts of modal knowledge (myself included) have no such difficulty. They hold that all modal knowledge is a consequence of essentialist knowledge. I take this consideration to add to the attractions of essentialist accounts of modal knowledge that have much more about them to recommend.⁶³

After defending an ontological argument for the existence of a unique sovereign being that relies on a possibility premise, the next section centres on an argument for the same conclusion but without a possibility premise. The reader who remains unconvinced with my defence of the possibility premise might still regard the next argument more favourably.

⁶³ For recent defences of essentialist accounts of modal knowledge, see Goff (forthcoming), Jago (forthcoming), and Mallozi (forthcoming).

3. An argument without a possibility premise

We turn now to the defence of an argument for the existence of God that does not rely on a possibility premise. The argument can be stated as follows:

- 9. A being is a god if and only if it is independent (premise)
- 10. There cannot be more than one independent being (premise)
- 11. There cannot be more than one god (from 10 and 11)
- 12. There exists an independent being (premise)

Therefore,

- 13. There exists a unique god (from 9, 11, and 12)

As previously indicated, a god is defined as a sovereign being. Premise (10) of the present argument is the same as the previously-defended premise (3). The work that remains is defending premises (9) and (12).

Let us begin with premise (9). This premise can be understood as claiming that the concepts 'god' and 'independent being' have the same extension. The gods are the independent beings, and vice versa. We already saw in the previous sections that every god is, by definition, an independent being. To justify premise (9), one must motivate the claim that every independent being is a god. This amounts to motivating the claim that every independent being is one with absolute authority.

This last claim concerns the power of an independent being. One is therefore required to expound upon the range of powers that an independent being has in order to be in a position to claim that said being qualifies for absolute authority. How can one assess the

power of an independent being? I suggest that we can do so based on a general principle that allows us to assess the power of any given being of whose essence we have a certain grasp.

Before presenting this principle, allow me to briefly outline what I mean by a power. A power is the power of some given beings, of some concrete particulars that are the possessors of the power.⁶⁴ Moreover, a power is a capacity to bring about the obtaining of some fact. The obtaining of said fact is the manifestation of the power. When the possessors of a given power bring about its manifestation, we say that they have exercised the said power. For example, we can say that I have the power to break a window. I am the possessor of this power and its manifestation is the fact that the window is broken. I have the power to break the window regardless of whether I actually exercise it to break the window or not. Powers can be unexercised, but it must be possible for them to be exercised (i.e., there is no power whose exercise by its possessors is metaphysically impossible. For instance, I do not have the power to become a prime number). If one wishes to, one can hold that powers are individuated by their possessors and manifestations. Two powers are identical if and only if they have the same possessors and the same manifestation.⁶⁵

With this conception of powers in hand, the question of interest for the defence of premise (9) relates to which powers a given being possesses. My answer lies in the following principle:

Essentialist Foundation of Powers (EFP):

⁶⁴ It seems plausible to suppose that there are some powers that are possessed collectively by several beings e.g., the power to generate an electric current of 1 Ampere that is possessed by a plurality of electrons. This is why I allow that a power has multiple possessors. Nothing important for the purposes of the current argument depends on this.

⁶⁵ Lowe (2010) defended a similar criterion for the identity of powers.

For any given being x ,

(a) x having a power P with a manifestation M is explained by x 's essence.

(b) x has a power P with a manifestation M if and only if it is compatible with x 's essence that it brings about that M obtains.⁶⁶

The EFP states that a given being has every power by whose exercise it is compatible with its essence and explains why it has these powers. The explanation in the context of the EFP is metaphysical. I leave it open whether this explanation should be understood in terms of grounding or of another relation of metaphysical explanation.

The EFP is an interesting principle because it answers the question of which powers exist generally and which are endowed to specific beings, while also explaining the possession of these powers through the essences of their possessors.

The EFP also carries the prospect of a more-than-welcome unification between essences and powers, both of which play a prominent role in theorising within fundamental metaphysics. Starting with essences, I join Lowe (2018) in thinking that one cannot do without essences in forming a coherent view of reality:

But why suppose that things must have 'essences' in this sense and that we can, at least in some cases, know those essences? First, because otherwise it makes no sense—or so I believe—to say that we can talk or think comprehendingly about things at all. If we do not at least know what a thing is, how can we talk or think comprehendingly about it? How, for instance, can I talk or think comprehendingly about Tom, a particular cat, if I don't know what cats are and which cat, in particular,

⁶⁶ For ease of exposition, I am concentrating on individual powers (i.e., those possessed by a single being).

Tom is? I am not saying that I must know everything about cats or about Tom in order to be able to talk or think comprehendingly about that particular animal. But I must know enough to distinguish the kind of thing that Tom is from other kinds of thing, and enough to distinguish Tom in particular from other individual things of Tom's kind. Otherwise, my talk and thought cannot really fasten upon Tom, as opposed to something else. (Lowe, 2018, p. 18)

Likewise, it seems just as inevitable to hold that concrete things can and do act in certain ways, i.e., that they have powers. Moreover, it adds to the attractions of powers that one can rely on them to build theories of laws of nature, metaphysical possibility, and causation, all of which are fundamental subjects of metaphysics (Mumford, 2009).

Metaphysics being primarily about what things there are, how they are, and how they could be, it seems that essences and powers are apt to play a foundational role in metaphysical inquiry. Essences answer the question of what things are and how they must be, while powers explain how things could be by acting and interacting with each other in the ways they are able to, i.e., by exercising their various powers.

The foregoing discussion suggests that taking essences and powers, whose postulation cannot be avoided, as fundamental theoretical posits can be the basis of a systematic metaphysical theory. As a matter of theoretical virtue, minimising the number of fundamental posits in one's metaphysics is always beneficial. The EFP precisely helps this by keeping essences as the unique fundamental posit and relegating powers to a derivative level that has its explanation in essences.

It should be noted that the choice of essences as the fundamental posit between essences and powers is not *ad hoc*. This is because beings, concrete particulars, are more

fundamental than their powers, which are partly individuated by their possessors. If one is to explain one of essences and powers through the other, it seems natural to offer an explanation of what things can do, of what powers they have, in terms of what those things are, i.e., in terms of their essences. An explanation in the other direction, of essences by powers, does not seem available. I thus contend that the EFP should be endorsed given that it yields the theoretical advantage of a more unified metaphysics with only one fundamental posit.

One might resist my line of argument by puzzling over how essences are supposed to explain powers. One could urge me to explain how essences give rise to powers and hold that, unless I give a satisfactory account, the EFP is ill justified. My reply draws upon Schaffer (2016), who stated:

Most generally, everyone needs their fundamental posits, and these posits must be outfitted with axioms (or else they are idle). It is a bad question – albeit one that has tempted excellent philosophers from Bradley through to van Fraassen and Lewis – to ask how a posit can do what its axioms say, for that work is simply the business of the posit. End of story. It is a good question to ask why one should believe that the posit so axiomatized is to be found in nature. But that question may be answered if the axioms and the epistemology are properly aligned [...] (Schaffer, 2016, p. 587)

My reply to those who might ask how essences can explain powers is that this explanation is an axiom of those that make essences play their fundamental theoretical role. This axiom is aligned with the epistemology of positing essences as the best explanation for a number of things, including powers.

Back then to our primary business, how can the EFP help us in assessing the extent of an independent being's power? The EFP helps in telling us that every being has all the powers that are compatible with their essence. Now, the simpler the essence of a given being, the wider its range of powers. This is because the less furnished an essence is, the fewer restrictions there are on what is compatible with it, and therefore the fewer restrictions there are on the powers that a being with that given essence has.

One then notes that the essence of an independent being is that it does not depend on other beings. An independent being has the simplest of all essences. This is because the essences of dependent beings are constituted by dependence relations, with the less fundamental beings having more dependencies than their more fundamental counterparts. By way of analogy, the essence of an independent being is akin to the empty set while the essences of dependent beings are similar to membered sets.

We can conclude that an independent being has the widest possible range of powers. Given that the range of powers subsumed under absolute authority is compatible with the essence of an independent being, an independent being has absolute authority and is thus a sovereign being, as asserted in premise (9).

I here offer two lines of support for premise (12). The first takes the form of the following argument:

- 14. There are dependent beings (premise)
- 15. There is an explanation of the existence of dependent beings (premise)
- 16. An explanation of the existence of dependent beings must involve independent beings (premise)

Therefore,

12. There exists an independent being (from 14, 15, 16, and 17)

I take premise (14) to be uncontroversial. The earlier example of the dioxygen atom suffices to establish its truth (examples of dependent beings naturally abound as almost every being is dependent).

The denial of premise (15) would be justified only if the existence of dependent beings is inapt for explanation. Indeed, if one is to deny that some facts have explanations, one must do so on principled grounds that determine why said facts are inapt. Otherwise, if one leaves it open that any fact whatsoever can obtain without explanation, one runs the risk of epistemic defeat. In particular, one would have no reason to suppose that the fact they hold a belief has an explanation, thus leaving it open that their beliefs are formed for no reason at all, including the belief that any fact whatsoever can obtain without an explanation.

In light of the above, a plausible principle that avoids *ad hoc* exceptions would be that any fact that is apt for explanation has an explanation. There seems to be no reason to hold that the existence of dependent beings is, in principle, inapt for explanation. If so, one is justified in holding that, as a default position, premise (15) is true.

The justification of premise (16) rests on the principle that metaphysical explanation is non-circular. This principle entails that the explanation of the existence of dependent beings must appeal to independent beings. Moreover, it seems to be beyond reproach to hold that, if some beings explain the existence of others, the former beings exist. This latter claim justifies the inference of (12) from the premises of the current argument.

I conclude this section by offering another argument for premise (12).

17. There is a concrete necessary being (premise)

18. A concrete necessary being is an independent being (premise)

Therefore,

12. There exists an independent being

Due to space limitations, I refer the reader to Pruss and Rasmussen (2018) for a justification of premise (17). Suffice it to say that there is an abundance of arguments for the conclusion that there is a concrete necessary being. I would like hereafter to focus on premise (18).

To support premise (18), it is useful to recall the Essentialist Analysis of Contingent Existence (EACE) introduced in the previous section.

EACE: the existence of a possible being x is contingent if and only if x is a dependent being and for some yy and R such that $D(x, R, yy)$, it is compatible with the essence of yy that $xRzz$ does not obtain for any zz among yy .

The EACE can be conjoined with the following principle to justify premise (18).

Inessentiality of dependence (ID): for any plurality of beings yy , being x and relation R such that $D(x, R, yy)$, it is compatible with the essence of yy that $xRzz$ does not obtain for any zz among yy .

The ID's plausibility stems from the asymmetry of essential dependence. While it is true in virtue of the essence of an independent being that it stands in certain relations with the beings upon which it essentially depends, the converse does not hold. It is not true in virtue of the essence of some plurality of beings that some of its members stand in a certain relation with a being that depends on said plurality. This allows one to conclude that it is

compatible with the essence of said plurality that none of its members stand in a given relation with a being that depends on them. This is what the ID states.

Now, taken together, the EACE and ID entail that a being is contingent if and only if it is dependent. This last claim is equivalent to it being the case that a being is necessary if and only if it is independent. Therefore, premise (18) holds.

This concludes my defence of this section's argument for the existence of a unique sovereign being.

4. Conclusion

The concept of a sovereign being is a legitimate starting point for an ontological argument for the existence of God. Building an ontological argument on the concept of a sovereign being circumvents various issues facing arguments based on the concept of the greatest possible being. There are other important advantages to working with the concept of a sovereign being. First, there is a more direct route to the uniqueness of God than that of the PBT. Second, one can eliminate the possibility premise, which is the most controversial in standard ontological arguments. Third, the concept of a sovereign being contains the key to an interesting unification of the ontological and cosmological arguments, making the resulting case for theism stronger. Fourth, the arguments defended in this paper shift the focus of the dispute regarding ontological arguments from question-begging and rhetorical tricks to fundamental issues in metaphysics. Perhaps surprisingly, holding an assortment of views about essences, powers, and the relations between them – issues that are *prima facie* theologically neutral – can have profound theological implications. Regardless of the success of the defended arguments, I hope to have paved the path to some promising developments

in the philosophy of religion that are informed by developments in fundamental general metaphysics.

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Paper 6

Naturalism and Theism on the Balance of Causality

1. Introduction

Worldviews can be considered as theories of everything that purport to explain reality in its deepest and most general aspects. Until recently, the history of human thought has been dominated by theistic worldviews that postulate divine beings to account for the origin of the world, to define how we ought to live, to provide our lives with meaning and direction.

With the advent of modern science, theistic worldviews have been increasingly challenged by competing perspectives that claim better support from our experience of the world and our ever-expanding knowledge of its workings that modern science and its methods support. Naturalism is the umbrella heading under which the great majority of modern non-theistic worldviews can be subsumed.

The intellectual dispute between theists and naturalists has usually taken the form of arguments and counter-arguments, where one party advances a set of premises that entails a conclusion that supports its worldview or undermines that of the other. Philosophy of religion has thus been dominated by the production of, and controversy over, deductive arguments for or against the existence of gods.

In recent years, there has been a surge of interest in alternative ways of adjudicating the dispute between theism and naturalism. One particularly promising way to pursue this lively debate is to take inspiration from the methods of modern science and its practice of theory choice.

In this spirit, theism and naturalism – as competing theories of everything – can be articulated as explanatory hypotheses of some evidence over which all parties agree or dispute, and are assessed using the theory choice method operative in science to determine which of the two theories is better supported by the evidence and ought to be rationally preferred as a worldview.⁶⁷

In a series of recent publications, Oppy (2011, 2012, 2013a, 2013b, 2018) undertook the assessment of the relative merits of theism and naturalism based on various pieces of evidence, and concluded each time that naturalism receives greater support from the evidence, and should thus be preferred to theism.

My aim is to challenge this conclusion and offer a case study that shows that, when the assessment is properly conducted, it is theism that ought to be preferred to naturalism.

My argument can be seen as an inductive theistic cosmological argument given that the evidence that I will base my assessment on is restricted to broad considerations about causation – the only type of consideration taken into account in traditional cosmological arguments for the existence of God. This argument should be considered as part of a wider exercise whose aim is to assess the relative merits of theism and naturalism when *all relevant evidence* is dutifully considered. I do not claim that broad considerations about causation are the only relevant evidence for a comparative assessment of theism and naturalism. The current argument is a case study whose aim is to build a toy example of what is otherwise a daunting task of theory comparison and whose proper conducting requires the engagement of the wider philosophical community. I have the rather modest

⁶⁷ That considered evidence has to be agreed upon by all parties is a dialectical requirement whose aim is to permit dialogue between the parties of the debate. This consideration is detailed further in §4.

aim of encouraging other philosophers to take part in this broader philosophical investigation.

The argument is structured as follows. §2 is dedicated to an articulation of theism and naturalism that is suitable for the assessment of their relative merits based on broad considerations about causation. §3 details the assessment method. §4 identifies the evidence based on which the assessment is conducted, as well as the different naturalistic and theistic hypotheses to compare. §5 is dedicated to the assessment of the relative merits of these hypotheses. §6 addresses the concern that my theistic hypothesis falls short of classical theism. §7 concludes the argument.

2. Naturalism and theism

For the purposes of comparing the theoretical virtues of naturalism and theism, taking into account a body of evidence that is restricted to general considerations about causality, we must first have some understanding of what both hypotheses are and of what they are committed to from a causal perspective.

Beginning with naturalism, the naturalistic hypothesis that is of interest for the purpose of a theoretical comparison with theism is what is commonly known as metaphysical or ontological naturalism. Metaphysical naturalism is a hypothesis about the nature of reality, of all there is. It has to be contrasted with methodological naturalism, which restricts the epistemological endeavour of justifying ontological commitments, with the methods and pronouncements of natural science. In what follows, my use of the word ‘naturalism’ is restricted to metaphysical naturalism.

It should be noted that there is widespread disagreement over the definition of naturalism. Philosophers taking irreconcilable stands on all sorts of subjects unite in labelling themselves and their positions as 'naturalist'. In the face of such disagreement about its exact content, I aim to identify a set of principles that form a minimal common ground to which all naturalists can commit. It is this minimal common ground that I shall assess in comparison with theism.

To start the identification of minimal naturalistic commitments, let us consider the following initial definition of naturalism that aims to capture its general spirit.

Naturalism: (a) There are only natural entities and properties.

(b) Natural entities and properties are those whose existence is licensed by our best theories of natural sciences.

This definition encounters a similar problem to that facing the standard definitions of physicalism, which is known as Hempel's dilemma. Hempel posed the following challenge to defining physicalism by appeal to the pronouncements of physical theories:

The physicalist claim that the language of physics can serve as a unitary language of science is inherently obscure: The language of what physics is meant? Surely not that of, say, 18th century physics; for it contains terms like 'caloric fluid', whose use is governed by theoretical assumptions now thought false. Nor can the language of contemporary physics claim the role of unitary language, since it will no doubt undergo further changes, too. The thesis of physicalism would seem to require a language in which a true theory of all physical phenomena can be formulated. But it

is quite unclear what is to be understood here by a physical phenomenon. (Hempel 1980, p. 195)

Naturalism thus faces the following dilemma. If naturalism is defined with reference to current scientific theories, it is almost surely false given that we have solid evidence from the history of science that our current theories are wrong in some respects and incomplete in others. If naturalism is defined with reference to some future true and complete scientific theory, it becomes meaningless or irremediably vague as nobody can know what this could be or whether it could even be formulated. Additionally, reliance on some hypothetical future complete and true scientific theory of everything renders naturalism a trivial doctrine (Chomsky, 1968).

Several strategies have been employed in response to this dilemma. Melnyk (2003) took the first horn of the dilemma. On his view, although naturalism, defined by reference to current best scientific theories, is almost surely false, its truth is far more probable than that of its rivals. Dowell (2006) and Wilson (2006) took the second horn by seeking to constrain what counts as legitimate natural entities by constraining what counts as legitimate scientific theories (Dowell, 2006), and excluding from the realm of the natural some entities or properties whose existence is taken to be incompatible with naturalism (Wilson, 2006). These moves sought to protect naturalism from (as science progresses) any trivialisation or accommodation of entities that are currently widely considered as non-naturalistic. Needless to say, these attempts have been challenged and further refinements of naturalism have been proposed which draw upon other theoretical resources, including the notions of supervenience, realisation, and grounding (Goff, 2017).⁶⁸

⁶⁸ Melnyk, Dowell, Wilson, and Goff each discussed the definition of physicalism rather than that of naturalism. Their positions admit of natural transpositions to the debate over the definition of naturalism that is commonly taken to have an intimate link with physicalism.

To circumvent the difficulties facing the definition of naturalism with reference to the content of current or future scientific theories, naturalism can be given an a priori definition that specifies what does not count as natural and allows, by negation, the deduction of what is natural. Montero and Papineau (2005) termed this definitional strategy the *Via Negativa*.⁶⁹ Several accounts of what is not natural can be proposed. For instance, it could be suggested that entities lacking causal powers are not natural. However, this allows all sorts of entities to be taken as natural, even those for which there is unanimity about their non-natural nature. God is the most obvious example of an entity that is taken to have causal powers but whose existence is unanimously taken to be incompatible with naturalism.

Alternatively, it can be stipulated that entities without a spatiotemporal location are not natural. This places the realm of mathematics – taken by many to be the exemplar of objective science – outside the natural world. It seems that many naturalists are happy to allow for the existence of abstract mathematical objects while maintaining their naturalism.

Another popular definition of naturalism considers the notion that fundamental mentality is not natural. Again, it seems to me that there are legitimate naturalistic stances whose content can accommodate the existence of fundamental mentality. For example, if some future best scientific theory posits fundamental mentality, it would be legitimate for naturalists to be committed to fundamental mentality without renouncing their naturalism.

Accordingly, in the face of the elusive essence of the natural, could there be a definition in the spirit of the *Via Negativa* that leaves room to abstracta and fundamental mentality while defining some common ground that naturalists can agree upon? I suggest that the key to such a definition resides in closely scrutinising the nature of scientific explanation with the

⁶⁹ Ironically, the *Via Negativa* has a theological cousin, negative theology, which consists of giving an account of the divine nature by specifying what God is not.

aim of determining some broad constraints whose violation by some entities cannot be accommodated within the scientific framework.

Broadly conceived, natural sciences are primarily concerned with the formulation and empirical confirmation of exceptionless regularities or laws that govern the interactions of natural entities, and allow for some of these to be explained by reference to others and the relevant regularities or laws. A distinctive feature of regularities and laws is that they constrain the causal powers of the entities that they govern. Entities with absolutely unlimited causal powers, which can directly bring about any possible state of affairs, cannot be accommodated by scientific explanation. Were such infinitely powerful entities to exist, they would be able to violate the regularities of nature and undermine their exceptionless character. Furthermore, there cannot be any regularities that constrain the powers of infinitely powerful entities which would be forever beyond the scope of scientific theorising. These considerations explain why the existence of an omnipotent God and the occurrence of miracles are unanimously taken to be incompatible with naturalism.

Building on the foregoing discussion, I suggest the following definition that captures a minimal commitment that all naturalists should share.

Minimal naturalism: there are no entities with unlimited causal power.

Minimal naturalism is consistent with the existence of causally-inert abstract entities that have no causal powers. Moreover, minimal naturalism is consistent with fundamental mentality in so far as the latter does not entail the existence of entities with unlimited causal powers.

It thus seems safe to claim that minimal naturalism is a necessary commitment of all naturalists, regardless of what else they wish to include as additional necessary commitments in their preferred version of naturalism. It is then this minimal naturalism whose theoretical virtues will be compared to theism.

Let us now turn to identifying a formulation of theism that is suitable to contrast with minimal naturalism in our theoretical assessment. The theistic hypothesis to be considered here is of the monotheistic type. Restricting the debate to monotheism can be justified in the simplicity and unification that this branch of theism enjoys in comparison with rival polytheistic views that offer no compensating explanatory advantage, with the additional deities they postulate, when the considered evidence is restricted to broad considerations about causality.

In a monotheistic setting and from a causal perspective, God is thought of as an uncaused cause of the existence of everything other than Himself. In other words, God is considered as a first cause. Furthermore, God is conceived of as a being to whose power there are no limits. God is said to be omnipotent. These widespread monotheistic commitments suggest the following theistic hypothesis as a competitor with minimal naturalism on causal grounds.

Minimal theism: there is a first cause with unlimited causal power.

It is evident that minimal naturalism and minimal theism are incompatible. The former entails that there is no entity with unlimited causal power, while the latter expressly entails such an entity. When considered as explanatory hypotheses, minimal naturalism and

minimal theism are then competitors in the sense that adopting one entails abandoning the other.⁷⁰

Now that we have two definite hypotheses to assess, let us move to defining the assessment procedure before applying it to the comparison of minimal naturalism and minimal theism.⁷¹

3. Assessment method

To determine which of naturalism and theism ought to be rationally preferred, let us use the usual theory choice procedure that is applied by scientists and philosophers alike. This consists of determining a set of theoretical virtues, ordering competing theories based on their relative satisfaction of each of these virtues and then delivering an aggregated ordering that determines the best theory that ought to be rationally preferred when considering all virtues. This is a form of multi-criteria decision making where the criteria are the different theoretical virtues and the intended decision concerns the theory that ought to be rationally preferred among its competitors.

There are some general conditions that the aggregated ordering must satisfy in order to be suitable for its task of determining the best theory. First, if a given theory *A* satisfies every theoretical virtue more suitably than another theory *B*, we would then want the aggregated ordering to give the verdict that *A* is better than *B*. This is the unanimity condition. If all virtues unanimously favour *A* over *B*, *A* ought to be preferred to *B*. Second, the aggregated ordering of two theories *A* and *B* must depend only on how they compare relatively to one another based on the different theoretical virtues. How *A* and *B* compare with other

⁷⁰ It seems plausible to hold that there cannot be more than one being with unlimited causal powers. This suggests that all forms of polytheism are compatible with minimal naturalism and lends additional support to focusing on a monotheistic hypothesis as a rival of naturalism.

⁷¹ In what follows, I drop the 'minimal' qualification and simply refer to our two competing hypotheses as 'naturalism' and 'theism'.

theories is irrelevant to the overall comparison of *A* and *B*. This is the irrelevance of independent alternatives condition. Third, we want the aggregated ordering of theories to not be fully determined by the ordering according to only one of the theoretical virtues. Were that the case, we would be declaring irrelevant for theory choice some theoretical virtues that we nonetheless included in our assessment, exactly because we believe them to be relevant for the task at hand. It follows that our aggregated ordering must be non-dictatorial. There must not be any single theoretical virtue whose pronouncements fully determine the aggregated ordering of theories regardless of the consideration of other virtues. Fourth, we want our aggregated ordering to be open to any combination of theory ordering based on the different virtues. Irrespective of how theories are ordered regarding each theoretical virtue, our aggregated ordering should be able to deliver a verdict concerning the overall order of preference of the different competing theories. This is the universal domain condition.

Unfortunately, Okasha (2011), building on Arrow's (1950) famous impossibility theorem, showed that there is no aggregated ordering of theories that satisfies the conditions of unanimity, independence of irrelevant alternatives, non-dictatorship and universal domain when there are more than two competing theories.

To circumvent Arrow's impossibility theorem, Okasha showed that an aggregated ordering which satisfies the four desirable conditions can be had by moving from simple ordinal rankings of theories based on the different virtues to quantitative strengths of satisfaction of theoretical virtues by each competing theory and the introduction of exchange rates between these virtues that determine how much theory *A* must exhibit of a given virtue *V* in

order to overcome its disadvantage in comparison with theory B that exceeds it by U units of virtue W .⁷²

Alas, there appears to be no objective way to determine either the degrees of satisfaction of theoretical virtues by competing theories or the exchange rates between virtues. It thus seems that, if one does not want to relax any of the conditions of unanimity, independence of irrelevant alternatives, non-dictatorship and universal domain, one must acknowledge that theory choice based on theoretical virtues' satisfaction and requiring a total aggregated order of theories is inherently a subjective matter.

Reacting to Okasha's findings, Bradley (2017) suggested dropping the requirement that the aggregated theory ordering be total. This amounts to allowing that there are theories that cannot be compared, all virtues considered. Rationality can be occasionally silent regarding the choice between two competing theories.

Bradley recommended a minimal constraint on rational theory choice that consists of preferring a theory A to another theory B just in case there is at least one virtue V that A satisfies better than B and no virtue W that B satisfies better than A . Otherwise, one cannot have a rational basis to prefer A to B , or vice versa. I here follow Bradley's advice.

With this commitment to a minimal constraint on rational theory choice, let us introduce the theoretical virtues to consider the relative merits of theism and naturalism.

Let us begin with simplicity. It is widely held that simpler theories should be preferred when all else is presumed equal. Simplicity is an intrinsic feature of theories that does not depend on their relationship with the evidence that they are invoked to explain. Three main considerations can be advanced to justify taking simplicity as an important theoretical

⁷² Okasha's suggestion is based on Sen's (1970, 1977, 1986) work on social choice theory.

virtue. First, it is thought to be a guide to the prior probability of theories, that is, their probability independently of evidence. The simpler a theory, the higher its prior probability. Second, preferring simpler theories is a direct application of Ockham's razor that prohibits positing entities beyond necessity. As Ockham's razor enjoys a distinguished standing among fundamental epistemological principles, simplicity is in turn elevated to its eminent rank among theoretical virtues. Third, simplicity is taken to be an embodiment of unification. Simpler theories offer a more unified explanation of the evidence. Unification is achieved when the same explanation is offered for diverse pieces of evidence. A common explanation for a broad stream of evidence tends to be considered a theoretical advantage given that this is thought to increase the likelihood of the underlying theory.

Although there is a wide consensus that simplicity is an important theoretical virtue, determining what considerations bear on the simplicity of explanatory hypotheses is far from straightforward and has been subject to continuing disagreement. Several criteria have been suggested for assessing the simplicity of a given theory. These include the number of posited entities, kinds of entities, properties, or the level of complexity of specification and mathematical formulation. The number of posited and kinds of entities reflects the ontological commitments of the theory. The number of posited properties can be taken to represent the ideological commitments of the theory. The simplicity of specification or mathematical formulation is a further criterion used to adjudicate between theories that fare equally well in terms of their ontological and ideological commitments.

The legitimacy of these criteria as guides to simplicity and the correct way to apply them has been disputed. To illustrate disputes regarding legitimacy, one can refer to the debate over the relevance of the number of posited entities to theoretical simplicity. Some philosophers

have rejected taking into account the number of posited entities by a given theory in the assessment of its simplicity. A notable example is Lewis (1973), whose view was to ‘recognize no presumption whatsoever in favour of quantitative parsimony’ (p. 87), with the latter standing for the requirement to postulate as few entities as required to account for the evidence under consideration. Nolan (1997) challenged Lewis’s view in arguing that the history of science provides relevant examples that vindicate the resort to quantitative parsimony as an ingredient of simplicity.

A notable dispute regarding the application of the criteria relevant to assessing theoretical simplicity is the debate over how ontological commitments of a given theory should be determined. Quine (1948) famously offered a quantificational account of ontological commitments that identifies them with the variables over which quantification is necessary to make true the assertions of the theory under consideration. Quine’s proposal faces issues related to the role that simple paraphrase can play in changing the ontological commitments of a theory while leaving its content unchanged. To avoid these issues and give content its due role in determining ontological commitments, it has been proposed that a theory is ontologically committed to anything whose existence is entailed by that theory (Jackson, 1989). However, issues remain regarding the appropriate notion of entailment that is conducive of ontological commitment (Bricker, 2016).

As we shall see when comparing the theoretical merits of naturalism and theism, I frame my argument in such a way as to minimise the impact of these deep disagreements about the considerations related to simplicity and their application.

With emphasis duly put on simplicity – which plays the major role in this paper’s main argument – allow me to briefly introduce the two remaining theoretical virtues that shall be

taken into account in the following sections. The first of these is explanatory adequacy, which concerns the plausibility and the quality of the explanation that a given theory offers for the evidence being explained. The is that of explanatory power, which measures how much a theory can explain. The greater the power of the theory to explain a wide range of evidence, the stronger it is. We shall see in due course how our two competing theories compare regarding these two virtues. This shall clarify how I suggest understanding explanatory adequacy and power.⁷³

Now that the assessment method has been described, let us move to identifying the evidence to take into account and to framing the different naturalistic hypotheses to be contrasted with minimal theism.

4. Evidence and explanatory hypotheses

For an assessment of the theoretical merits of naturalism and theism on the basis of broad considerations about causality, the evidence upon which the assessment is performed must be highly generally so that both naturalists and theists can agree about it and accept to take it as evidence.

A suitable piece of evidence is one that is compatible with both of our competing theories. Otherwise, this purported evidence is simply part of the disagreement. Taking such evidence as a basis for the intended assessment of both theories is devoid of dialectical and argumentative force, and is rightly subject to question-begging complaints from the side whose preferred theory is incompatible with this alleged evidence. Taking these

⁷³ Fit with background knowledge is another important theoretical virtue. As argued by Swinburne (2004), the background knowledge when assessing grand theories of everything, or such worldviews as theism and naturalism, are merely tautological. As far as both competing worldviews are internally coherent, they fit equally well with a tautological background knowledge. The virtue of fit with background knowledge thus plays no role in favouring one of the worldviews over the other, and is simply ignored for our current purposes.

considerations into account, I suggest considering as evidence the fact that there are beings whose existence is caused. This is general enough, hardly deniable, and compatible with both naturalism and theism. Another consideration in favour of limiting our evidence to these high-level considerations is that many lower-level considerations do not adjudicate the dispute between naturalism and theism that are, to a large extent, theories about ultimate origins. In most cases, there seem to be accounts of lower-level phenomena that are compatible with both theism and naturalism (e.g., dispositional essentialism to explain the laws of nature).

The assessment question is which of the two theories, naturalism or theism, provides a better explanation of the considered evidence?

There are three main naturalistic competitors of theism that can be advanced as ultimate causal explanations of the considered evidence.⁷⁴

Infinite Causal Regress (ICR): there are no uncaused beings.

Multiple Uncaused Causes (MUC): there are multiple uncaused beings.⁷⁵

Natural First Cause (NFC): there is a first cause with limited causal power.

Let us now turn to assessing the relative merits of the considered explanatory hypotheses, namely the three naturalistic hypotheses and theism.

5. Assessment

⁷⁴ I assume that there cannot be circles of causes, which is why I do not include one among the naturalistic hypotheses to assess.

⁷⁵ It might seem required to include the qualification 'natural' to describe the uncaused causes of the MUC hypothesis. As indicated in note 70, all hypotheses postulating a multitude of uncaused beings are naturalistic hypotheses (where naturalism is understood as minimal naturalism). There is then no need to add the 'natural' qualification to the definition of MUC.

Under ICR, there is no explanation of the considered evidence. While ICR can be considered to explain the existence of each caused being, it provides no causal explanation of the general evidence that is the existence of caused beings. Moreover, ICR is an extremely extravagant hypothesis from an ontological standpoint. For every caused being, ICR postulates the existence of an infinity of other beings, yet still fails to explain the evidence for which it is postulated to account.

The three remaining hypotheses, MUC, NFC, and theism all provide a causal explanation for the existence of every caused being – and the existence of caused beings in general – through the postulation of a finite number of uncaused causes. All three hypotheses explain what ICR explains, the existence of each caused being, in addition to explaining what ICR cannot explain, the existence of caused beings. Furthermore, ICR's extravagant ontology weakens its ontological parsimony in comparison with its three competitors.

All in all, ICR loses to all its competitors on grounds of explanatory adequacy and power, and simplicity. We can conclude that MUC, NFC, and theism are to be preferred over ICR.

To provide an ultimate causal explanation of the existence of caused beings, MUC, NFC, and theism postulate the existence of a number of uncaused causes. MUC proposes more uncaused causes than NFC and theism, both of which only postulate one. The additional uncaused causes of MUC do not confer it any explanatory advantage over NFC and theism, and make its offered explanation less unified than that of its two competitors. MUC multiplies fundamental entities beyond necessity, thus making it less virtuous than NFC and theism.

The finalists are then NFC and theism. Both hypotheses are on par in terms of explanatory adequacy and power. If we are to prefer one hypothesis to the other, this has to be on grounds of simplicity.

To compare NFC and theism on these grounds, it would be helpful to restate to what each theory amounts:

(Minimal) Theism: there is a first cause with unlimited causal power.

Natural First Cause (NFC): there is a first cause with limited causal power.

To decide which of the two is simpler, the crucial question to answer is which of the postulation of unlimited and limited causal power of the first cause yields a simpler theory.

I contend that it is the postulation of unlimited causal power, and therefore theism, that is simpler.

To justify my claim, let us consider the procedure through which an ultimate causal explanation of the existence of caused beings is constructed.

One must begin by noting that the needed explanation, if it is to escape circularity, must postulate some uncaused beings. One then sees that the postulation of only one uncaused being is sufficient for the explanatory task at hand. Moreover, postulating one uncaused cause that is a cause of all other beings yields a unified explanation and, therefore, a more virtuous explanatory hypothesis. Accordingly, the postulation of a first cause scores better on grounds of ontological parsimony and unification than any other hypothesis postulating more uncaused causes.

The first cause must now have some causal power so that it can causally explain the existence of caused beings. Theism leaves the matter open and postulates no additional

limitation in the causal power of its postulated first cause. On the contrary, in addition to the causal power that theism acknowledges for the first cause, NFC moves to supplement its specification with additional constraints on the causal powers of the first cause.

To specify theism, one only needs to say that there is a first cause. The qualification ‘with unlimited causal power’ that I explicitly included in my definition of theism is simply a consequence of not specifying any arbitrary limitation in the causal powers of the first cause. Given that there is no gain in explanatory adequacy or power in advancing limitations in the causal powers of the first cause, any postulated limitation is arbitrary, unmotivated, and induces a theoretical cost, a loss of simplicity, that has no compensating benefit.

NFC is more complex than theism because it must move beyond the commitments of the latter to specify some limitations in the causal powers of the first cause.

One can object to my conclusion on the grounds that theism in fact proposes an infinity of powers attributed to the first cause, instead of simply refraining from postulating limitations to its causal power that do not yield any gain in explanatory adequacy or power. Is this proliferation of powers not a cost of theism that NFC avoids? Is theism not a theory of far greater scope than NFC?⁷⁶

The origin of this worry seems to lie in the thought that one is committed to assigning a distinct causal power to a given entity whenever one acknowledges said entity’s capacity to bring about some state of affairs. The more states of affairs an entity is able to bring about, the more distinct powers it has.

⁷⁶ Scope is another important consideration in assessing the intrinsic probability of a hypothesis. The more a theory says than can be false, the less intrinsically probable it is. One can think that theism has a much greater scope than NFC given the latter’s compatibility with a wide range of degrees of power of the first cause, while the former requires a specific degree of power. This is mistaken because NFC has to *specify* the degree of power of its first cause with a *justification* of why the limit that it requires should be accepted. It then results that NFC is guaranteed to have a greater scope than theism (or at least a scope as wide as that of theism).

If so, it seems that if one were to take our best scientific theories seriously – as the naturalist should do – all sorts of entities would then have an infinite number of causal powers. For example, a physical object having electrical charge *C* can bring about an infinite number of states of affairs, such as it exerting a force of a certain intensity on another electrically-charged physical object. It would then be plausible to hold that the naturalist should already be committed to entities with an infinite number of causal powers, entities that can bring about an infinite number of states of affairs. It is therefore no additional cost of theism to entail that the first cause is able to bring about an infinite number of states of affairs.⁷⁷

My conclusion that theism is simpler than NFC can also be disputed on the grounds that, while NFC is committed to only one kind of entity, the natural, theism carries a commitment to two kinds of entities, the natural and the supernatural. There is then a sense in which NFC is more parsimonious than theism because it appeals to fewer kinds of entities. NFC can then be claimed to exhibit a continuity that is absent in theism. To offer its explanation of the considered evidence, NFC appeals to an entity of the same kind as that of the entities that it is invoked to explain. On the contrary, theism introduces a new kind of entity to offer its explanation.

I do not think that this objection carries much force. This is because the individuation of kinds is an inherently subjective and arbitrary matter.⁷⁸ While the naturalist can stipulate that entities of limited causal power constitute a single kind, there is nothing that forces the

⁷⁷ Another objection to the current argument is that we should be agnostic about the extent of the power of the first cause instead of taking sides for theism or NFC. My reply is that we should go for the simplest theory, which is theism.

⁷⁸ If you are a realist about natural kinds, you can consider that I am only claiming that the general considerations about causality appealed to in the current argument do not form a basis for an objective classification into kinds according to which an entity with unlimited power belongs to a specific kind (a kind that cannot have more than one member).

theist to agree. What both theists and naturalists agree upon is the existence of entities that enter into causal relations and that some are caused to exist. Introducing further considerations to divide these causally-powerful entities into kinds for the purposes of claiming an artificial parsimony advantage to one's preferred theory cannot be a successful move. Instead of giving the extent of an entity's power a relevance in determining to which kind it belongs, why not, for example, give relevance to its causal origin? Entities that are caused to exist would then belong to one kind, while entities whose existence is uncaused would belong to another. Under this classification, both NFC and theism are committed to the existence of entities of both kinds, the caused and the uncaused, and none of the two hypotheses is more parsimonious than the other when it comes to the number of kinds of entities to which it is committed.

I am, of course, not arguing that the classification of causally-powerful entities based on their causal origin should be preferred to a classification based on the extent of their causal powers or any other classification. I am simply highlighting the arbitrary and conventional nature of such a classification, and concluding that an advantage on the basis of the postulation of fewer kinds of entities cannot be claimed to adjudicate the dispute between naturalism and theism and, if such a move were made, it would be devoid of any argumentative force.

I would thus conclude that theism is simpler than NFC, which adds complexity to its specification by requiring some determinate limitations of the causal powers of the first cause that theism refrains from requiring. The cost of the additional complexity of NFC is not balanced by any gain in explanatory adequacy or power.⁷⁹

⁷⁹ The concept of *coherence* deployed by Draper (2016) lends support to theism (understood as minimal theism in the current context). For Draper, the more the different parts of a theory support each other, the more the theory is intrinsically probable.

Theism is thus the clear winner of our contest. It is the hypothesis, among the four considered competitors, that scores the best in terms of simplicity, and that is not trumped by any competitor when it comes to explanatory adequacy and power.

6. Is this theism?

A standard objection to deductive and inductive theistic first cause arguments is that they provide no reason to identify the first cause with the God of traditional theism. One might want to raise the same objection against my current argument and say, 'So what? Even if your minimal theism is favoured over naturalism on causal considerations, this does not lend any support to a belief in the God of traditional theism'.

My first answer to this objection would be that my conclusion, if granted, is significant independently of the extent to which my argument directly supports classical theism. If one acknowledges that general considerations about causality speak against naturalism, one has defeasible reason to raise one's credence in theism given that one (serious) competitor of theism has its credence lowered as a result of the current argument.

That said, I will now argue that some classical divine attributes can be plausibly attributed to the first cause of minimal theism. This will help bridge the gap between this first cause and the God of classical theism.

The first attribute that is most evidently suggested by the formulation of minimal theism is that of omnipotence. Minimal theism is the thesis that there is a first cause with unlimited

To postulate, for example, that God can bring about some contingent future states and not others is less coherent than claiming that God is omnipotent because the ability to bring about some such states is evidence for the ability to bring about other such states. (Draper 2016, p. 61)

In Draper's view, unlimited power is far more coherent than an arbitrarily limited power. If coherence, as Draper argues, is the correct way to evaluate the intrinsic probability of theories, theism is then more intrinsically probable than naturalism.

causal power. Unlimited causal power is understood as the ability to directly cause any state of affairs that can be originated. Thus understood, the extent of the first cause's power is maximal because it cannot be surpassed. There cannot be any being whose power extends beyond what the first cause is able to do. This legitimates attributing omnipotence to the first cause of minimal theism.

What about knowledge? Could we plausibly hold that the first cause knows some truths and if so, what is the extent of its knowledge? It seems plausible to hold that the first cause must possess some knowledge. A first consideration in favour of this claim is that there are some states of affairs that can be brought about, which the first cause must be able to originate given its unlimited power, whose generation requires some knowledge. For example, the state of affairs of it being known what words I am currently writing is one that can be originated. The ability of the first cause to directly bring about such state of affairs suggests that the first cause should be able to know what words I am currently writing. Given its unlimited power, the first cause should be able to originate the considered state of affairs without depending on some intermediary, for example, another subject to acquire the knowledge necessary to bring about the state of affairs that the words that I am currently writing are known.

A second consideration in favour of attributing knowledge to the first cause of minimal theism is that limitations in knowledge entail limitations in power. For example, suppose that I have in front of me a text written in Mandarin. Given that I do not know what the different words of this text mean, I am unable to understand it or explain it to somebody else. The first cause of minimal theism must then have unlimited knowledge because any limitation in

its knowledge would limit its supposedly-unlimited power. It is then plausible to hold that the first cause of minimal theism is omniscient.

Similar considerations justify attributing intentionality and will to the first cause of minimal theism. Given that there are intentional and freely-chosen states of affairs that can be brought about, the first cause of minimal theism, in virtue of its unlimited power, must have the required intentionality and will to originate these states of affairs.

It would also be plausible to hold that the first cause of minimal theism cannot fail to exist. For if there are possible circumstances under which the first cause does not exist, the first cause would be unable to do anything in said circumstances. I mean by this that, existence being a prerequisite for causal activity, the possibility of the non-existence of the first cause limits its power and is then inconsistent with the unlimited causal power that the first cause of classical theism is supposed to have. The first cause of classical theism is therefore plausibly a necessary being, a being whose non-existence is impossible.

Another route to necessary existence starts from the thought that an uncaused being should be one that exists in virtue of its essence, a being whose uncaused existence is explained by its essence. This move ensures the necessity of the uncaused existence of the first cause and avoids holding that it is a brute contingency (if nothing about the essence of the first cause explains its uncaused existence, it would be legitimate to ask why the first cause exists). Having fewer brute contingencies in one's theory is plausibly conducive to greater theoretical virtue and can be therefore a motivation to hold that the first cause of minimal theism exists in virtue of its essence and, consequently, is a necessary being.⁸⁰

⁸⁰ I argued in greater detail in Paper 3 that every concrete being is either such that it exists in virtue of its essence or it is caused to exist by other beings. If this conclusion is granted, an uncaused being must be one that exists in virtue of its essence and such a being would be necessary.

Thus far, I have argued there to be solid ground upon which to hold that the first cause of classical theism is a necessarily existing person who is omnipotent, omniscient, and has a free will. The minimal theistic hypothesis that I considered has plausible implications that make it worthy of its theistic title.

Some readers may be thinking that I have forgotten a highly important aspect. Indeed, I have drawn no conclusion regarding the moral character of the first cause of minimal theism. Is it not a fundamental commitment of traditional theism that God is perfectly good? Any being that falls short of perfect goodness cannot deserve to be named God.

My response to this worry is two-fold. First, my argument is based on a body of evidence that is restricted to general considerations about causation. Considerations about morality are completely absent from my assessment of the different competing hypotheses considered above. I do not believe there to be good reasons to infer anything about the moral character of the first cause of minimal theism. The line of thought that I developed to justify the plausibility of attributing some of the main traditional divine attributes to the first cause of minimal theism seems impotent when it comes to judging its moral virtue. While states of affairs involving instances of love, compassion, and moral virtue can generally be originated, and thus fall within the scope of the first cause's power and justify it to be capable of morally virtuous actions, it is similarly true that states of affairs involving morally blameworthy actions fall in the scope of the first cause's power, meaning that it is similarly capable of morally blameworthy actions. The first cause of minimal theism is then capable, in principle, of evil actions. This stands in contrast with some theistic views according to which God is incapable of such actions.⁸¹

⁸¹ For a defence of the view that God cannot perform evil actions, refer to Swinburne (2004). This view seems to be mainstream among Christian theists.

Second, I am sympathetic to a version of divine will theory of ethics that holds that the divine will is constitutive of moral value. I take such a theory to have the advantage of unifying the explanation of morality with the explanation of other aspects of reality, including the existence of all non-divine beings, in the divine will. As such, I hold that there are no objective moral standards that are independent of the divine will and against which the goodness of the divine actions can be assessed. Moreover, it is such objective moral standards that should be supposed to make sense of inquiring about the moral character of the first cause of minimal theism in the context of the current inductive cosmological argument. It is therefore no shortcoming of my argument that the perfect goodness of the first cause, according to some objective standards independent of its will, cannot be justified.⁸²

7. Conclusion

In the above, I have defended what can be considered an inductive theistic cosmological argument. I argued that an assessment of the theoretical virtues of naturalism and theism, against a body of evidence restricted to general considerations about causality, favours theism over naturalism.

To perform this assessment, I formulated minimal versions of both naturalism and theism that should be acceptable to all parties of the debate over which of the worldviews ought to be preferred.

My version of minimal naturalism has an analysis of the nature of scientific explanation that does not accommodate entities with unlimited causal power as its foundation. Working with

⁸² Another significant advantage of a divine will theory of ethics is that it dissolves the problem of evil that is, arguably, the strongest argument against the existence of God.

this minimal version of naturalism has the advantage of circumventing the difficult issue of providing a satisfactory definition of naturalism that ought to be accepted by all naturalists.

In declaring minimal theism, the thesis that there is a first cause with unlimited causal power, more theoretically virtuous than naturalism, I argued that theism does at least as well as naturalism in explaining the existence of caused beings and, crucially, that minimal theism is simpler than naturalism.

The last part of the argument was intended to show that minimal theism has sufficient resources to make it worthy of its theistic label. I argued that minimal theism plausibly supports the attribution of necessary existence, omnipotence, omniscience, and free will to its first cause, making it as close as it could to the God of traditional theism.

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