COULD GOD FAIL TO EXIST?

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Abstract. I apply developments in modal reasoning to the question of whether God has necessary existence. My larger task is to assess the main reasons to think that God is *not* a metaphysically necessary being. I consider Hume's conceivability-based argument, and then I pay attention to more recent arguments, including Swinburne's neo-Humean argument and the subtraction argument. I show that such arguments face a 'parity' problem, since the very reasoning that gets them off the ground also launches parallel arguments for an opposite conclusion. In my closing section, I sketch an argument schema designed to illustrate a new, general strategy for deducing the necessary existence of God by building upon recent modal cosmological arguments.

I. INTRODUCTION

How stable is God's existence? Many theists have thought that God's existence is as stable as possible: God is not the kind of being that *could* fail to exist. Are they right?

Here is a quick reason to think so. God is supposed to be the greatest conceivable being, or something near enough. The greatest conceivable being enjoys the strongest conceivable grip on existence: after all, a being is intuitively greater if it cannot fail to exist than it if can. So: God enjoys the strongest conceivable grip on existence. Therefore, God enjoys necessary existence – assuming God exists at all.

But there is a problem. Imagine a world that is empty of all beings. Can't you do that? If so, then you can conceive of a world in which God does not exist. From here it follows that even if God *does* exist,

his non-existence is conceivable. But then God doesn't have the strongest conceivable grip on existence. His non-existence is not inconceivable in the way that it is inconceivable for (say) a sphere to be wholly inside itself. So, we face a problem if we suppose that God cannot, in the strongest sense, fail to exist.

We have a puzzle here. If God *can* fail to exist, then it is difficult to think of God as *maximally* great. Wouldn't a necessary God be greater? If, on the other hand, God *cannot* fail to exist, then we've got to somehow shake the sense that an empty world is perfectly possible. Either way is puzzling.

How one solves the puzzle affects one's metaphysics and philosophical theology in many ways. For example, if God has necessary existence, then one could theorize that necessary abstracta are constituents of God's necessarily instantiated nature. By contrast, if God does not have necessary existence, then abstract objects – such as, properties, propositions, numbers – either have a stronger grip on existence than does God, or they are somehow contingent beings, if they exist at all. Also, if God has necessary existence, then the fact that God exists may explain why there is something rather than nothing, since the option that there is nothing would then be impossible. Furthermore, the great-making status of necessary existence hangs in the balance.

I will show how developments in modal logic and explanation-based reasoning lay a foundation for a fresh defence of the position that God has necessary existence. My primary task is to show that the toughest objections to God's necessary existence, including the conceivability-based objection, Swinburne's related semantic objection, and the recent subtraction argument, fall prey to a parity problem. In the final section, I'll outline a new argument strategy for establishing the necessary existence of God.

II. DEFENCE

Let us begin by getting clear on what it means to say that God has *necessary existence*. I will follow both Plantinga (who thinks God has necessary existence) and Swinburne (who thinks God does not have necessary existence) by treating 'metaphysical necessity' as expressing the strongest form of necessity. I am interested in the strongest form of necessity since it is the form of necessity that God's existence has been

classically thought to exemplify. So, if '❑' abbreviates 'it is metaphysically necessary that', then we may state our hypothesis as follows:

(N) God exists → ❑ God exists.

Note first that the hypothesis here is ontological, not epistemological: it is about what must *be*, not what a rational person must *think*.

We may further clarify the meaning of '❑' by distinguishing it from strict logical necessity. I consider it an open question at the outset whether all metaphysical necessities are deducible from the cannons of logic (together with appropriate definitions of the terms involved). We will return to this question when we discuss Swinburne's semantic objection. For now, what matters is that we understand metaphysical necessity as the strongest form of necessity. We might express the notion this way: *p* is metaphysically necessary if and only if *p* is true at every world at which the basic rules of logic hold. Or more succinctly: *p* is metaphysically necessary if and only if *p* is true wherever there are no true contradictions.[1] In either case, I leave open whether there are metaphysically necessary truths that cannot be *shown* to be true via strict logical deduction.

I will assume that the axioms of S5 modal logic characterize metaphysical necessity.[2] In particular, I will assume that necessities are necessarily necessary and that possibilities are necessarily possible. These assumptions are in keeping with treating metaphysical necessity as the strongest sort of necessity: modal notions are so strong that they *cannot* vary. Moreover, the thesis that God has necessary existence in a sense that is consistent with S5 logic is interesting in its own right.

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[1] Notice here that I have not reduced metaphysical necessity to strict (or narrow) logical necessity. To say that metaphysically necessary truths hold in the same worlds where strictly logically necessary truths hold is not to say that all metaphysically necessary truths *are* strictly logically necessary. Nor is it to say they are not.

[2] Specifically, I assume the following axioms (where '◊p' abbreviates 'it is not necessary that not p'):

M: ❑p → p

K: ❑(p → q) → (❑p → ❑q)

4: ❑p → ❑❑p

5: ◊p → ❑◊p

I leave out **N** (the necessitation rule) because **N**, together with standard non-free logic, implies that the theorem, $\exists x\,(x = x)$, is necessary, and thus that there must be something. One may wish to avoid building into the *meaning* of 'necessity' anything that strictly implies the controversial metaphysical hypothesis that there must be something.

We are now ready to consider objections to (N). The main objections throughout history fall into three categories: conceptual, semantic, and ontological. Each objection is designed to show that there could be a world without any (concrete) beings. I will assess a representative instance of each category.

The Problem of Conceivability

David Hume famously writes, 'Whatever we conceive as existent, we can also conceive as non-existent' (1854: IX, 189). He goes on to argue that our notion of *necessity* cannot apply to God, since we can conceive of God as non-existent. He concludes: God is not a necessary being.

Let us slow down the objection. Hume suggests that any conceivable thing can be conceived to not exist. Now he doesn't really need to assume that it is possible to conceive of the nature of a necessary being. Perhaps such a nature is actually inconceivable. What's crucial for his argument is that we can conceive of worlds that are empty of all beings. Or, for those who think that it is impossible to coherently conceive of a world that is empty of *abstract* entities, such as numbers, properties, or worlds themselves, we may focus on *concrete* – causally capable – things. We can conceive of a world without any concrete things, it seems. So I think we can put Hume's argument in its best light as follows:

A1: A world empty of concrete things is conceivable.

A2: If a world empty of concrete things is conceivable, then such a world is possible.

A3: Therefore, a world empty of concrete things is possible.

A4: If a world empty of concrete things is possible, then there is no necessary concrete thing.

A5: Therefore, there is no necessary concrete thing.

There are reasons to like each premise. The first premise is plausible on reflection: just imagine a world containing nothing but empty space. Such a world has nothing concrete in it (assuming the empty space is not itself concrete). By imagining such a world, we verify that it is conceivable.

The second premise – that conceivability implies possibility – may be justified by David Chalmers' conceivability tests (2002: 145-200). Chalmers carefully distinguishes several different notions of conceivability and proposes how they might guide us into reliable

judgments about metaphysical possibilities. Conceivability is especially helpful, he argues, when it is 'positive' and 'ideal'. One *positively* conceives of a situation S when one is able to coherently imagine a situation in which S obtains. Chalmers understands 'imagination' as broader than visual imaging (like in a vivid dream), since an imagination can include a conceptual or intuitive representation, such as when one brings to mind the details of a logic or math proof. Conceivability is *ideal* if no amount of further scrutinizing would or could reveal incoherence in what one is imagining. So, for example, if a perfect cognizer is able to (positively) conceive the situation in question, then the situation is ideally (positively) conceivable. But, even without ideal conceivability, one can enjoy prima facie (upon initial inspection) or secunda (upon further inspection) conceivability. These notions provide varying degrees of justification for modal judgments, where the more we inspect, the more justification our modal judgments may enjoy.

We may apply Chalmers's epistemology to our modal judgments about the empty world. It seems we can positively conceive of an empty world. Furthermore, this conception is anywhere between prima facie to ideal conceivability. So if Chalmers's test is a good one, it seems we have good reason to think that an empty world is metaphysically possible.

The next premise is A4: if a world of concrete things is possible, then there is no necessary concrete thing. This premise is plausible given the definition of 'necessary concrete thing': such a thing exists and is concrete in all possible worlds if it exists in any.

The conclusion follows: there is no necessary concrete thing.

Reply:

Conceivability is a two-edged sword. Consider, first, what it takes to conceive of an empty world. I suggested that we can conceive of an empty world by imagining a world that has no concrete things. This imagination goes beyond mere visualization, though: we imagined that there are no concrete things, but no mental image contains what does *not* exist. A mental image of blank 'space', for example, is not a picture of nothing: such an image doesn't preclude the existence of things outside the imagined region; nor does it preclude invisible or non-extended things within it. To imagine a completely empty world, one must bring to mind the very abstract and general idea that there are no (concrete) things of any kind, visible or invisible, spatial or non-spatial. Such imagination

may count as 'positive' in Chalmer's sense, but the imagination involved is deeply conceptual.[3]

Once we allow conceptual imagination, one wonders why we cannot conceptually imagine that there is a necessary being. Try this. Imagine that there is a black particle that never comes into being or goes out of being. Then imagine that the reason the particle persists so long is that it cannot fail to exist. If you can do that, then you can imagine that there is something necessary.

Notice here that we didn't have to get into our minds all possible worlds in order to imagine that there is something necessary, just as we didn't have to get into our minds all possible concrete things in order to imagine that no concrete things are real. The question remains, then: if we can imagine that there is nothing, why can't we equally well imagine that there is something necessary?

Someone might answer that the proposition that something is necessary is importantly different because it includes a *modal* notion: it says that something is *necessary*. By contrast, the proposition that there is nothing is merely a statement about what doesn't exist. No modality is included in that statement. Perhaps conceiving of modal situations is a less reliable guide to possibility than conceiving of non-modal situations. So the stalemate is broken in favour of the argument against necessary beings.[4]

This answer is also two-edged, however. For there are conceivable non-modal situations whose possibility implies that there is necessary being. I'll give one example. Consider a situation in which there are some concrete things, such that for any of them, there is an explanation of the fact that those things exist. Call this situation 'E'. E is non-modal: it includes no statement about what must or could be. Furthermore, there is no obvious reason to think it is more difficult for one to conceive of E than it is to conceive of an empty world. In both cases, one entertains a general situation, either about universal non-existence or about universal explanation. By hypothesis, therefore, we have evidence for the *possibilit*y of E. But from here, we may deduce that there is a necessary being as follows:

B1: Suppose there is no necessary concrete thing.

[3] For more about the difficulties with imagining an absence of reality, see Pruss 2009: 47-49.

[4] I owe this reply to Mark Balaguer.

B2: Then there cannot be a necessary concrete thing.

B3: If there cannot be a necessary concrete thing, then there cannot be an explanation of the existence of all *contingent* (i.e. non-necessary) concrete things.[5]

B4: But, there can be an explanation of the existence of all contingent concrete things (because E is possible).[6]

B5: Therefore, the starting assumption is false: there is a necessary concrete thing.

Each step in the deduction follows from normal definitions. B2 follows from B1, given the modal system in play, which implicitly characterizes 'metaphysical necessity'.[7] B3 follows from an ordinary meaning of 'explanation' on which an explanation of the existence of some contingent things cannot be solely in terms of one or more of those very

[5] In terms of possible worlds: if no possible world contains a necessary concrete thing, then for every possible world containing contingent concrete things, there is no explanation of the existence of all the contingent concrete things in that world. (I am assuming for the sake of argument that in the possible world where E obtains, there are *contingent* concrete things. E includes the fact that there are concrete things. So if there are no contingent things, then in the world where E obtains, it straightforwardly follows that there is a necessary concrete thing.)

[6] In terms of possible worlds: there is a possible world containing contingent concrete things, where there is an explanation of the existence of all the contingent concrete things in that world.

[7] Here is a proof of the inference:

Let 'N' abbreviate '$\exists$x (N(x)', where 'N(x)' reads '$\Box$ ($\exists$!(x) & $\Diamond$ ($\exists$y (x causes y)))'. Then:

1. Assume $\Diamond$N.
2. Then: $\Diamond\Box$N. ($\Box$(N $\rightarrow$ $\Box$N), by axioms **4** & **5**)
3. Now suppose (for the sake of argument) that $\Diamond\sim$N.
4. Then: $\Box\Diamond\sim$N. (by axiom **5**)
5. Then: $\sim\Diamond\sim\Diamond\sim$N. (by substituting '$\sim\Diamond\sim$' for '$\Box$')
6. Then: $\sim\Diamond\sim\sim\Box\sim\sim$N. (by substituting '$\sim\Box\sim$' for the second '$\Diamond$')
7. Then: $\sim\Diamond\Box$N. (because '$\sim\sim$X' is equivalent to 'X')
8. But (7) contradicts (2).
9. So: (3) is not true. ((3) $\rightarrow$ (7))
10. So: $\sim\Diamond\sim$N.
11. So: $\Box$N. (by substituting '$\Box$' for '$\sim\Diamond\sim$')
12. So: N. ($\Box$X $\rightarrow$ X, by axiom **M**)
13: So: if $\Diamond$N, then N.
13: So: if $\sim$N, then $\sim\Diamond$N.

Note that I am treating causal capacity as a sufficient condition for concreteness. But even without that assumption, it is plausible that concrete things are essentially concrete, which is all we need.

same things.[8] To be sure, if the things whose existence is to be explained are not contingent, then there may be an explanation in terms of the impossibility of their non-existence. But that option isn't available for contingent things.

The final premise, B4, is justified by the very conceivability test that gives life to Hume's conceivability-based argument. So we have a parity problem. The conceivability test that we used to garner evidence for the possibility of an empty world gives us evidence for the critical premise in an argument against the possibility of an empty world. The arguments are awash.

It is far from clear how a defender of a conceivability-based argument against a necessary being may avoid the parity problem. Three tasks are required: (i) explain what it means to *conceive* of an empty world; (ii) explain why we should think that conceiving, in this way, is a reliable guide to metaphysical possibility; and, perhaps most importantly, (iii) block 'parity' arguments that purport to show that there are conceivable situations whose very possibility is incompatible with the possibility of an empty world. I won't claim that these tasks 'cannot' all be accomplished in principle. But unless they are, the argument from conceivability ends in stalemate.

Seeing this stalemate is not a trivial matter. We teased it out with the help of post-Humean modal logic – especially to deduce the inference from B1 to B2.

On a final note, it might turn out that a necessary being has a nature, such that if one were to fully conceive it, one could not conceive of it as non-existent. Nothing we *do* conceive rules that option out.

The Problem of Semantics

Richard Swinburne (2012) adds teeth to the Humean principle that whatever can exist can fail to exist. His argument begins with the following semantic assumption:

[8] In case there are doubts, we could make the definition explicit by filling out the notion of 'explanation' in play: so, for example, we could run the argument in terms of 'non-circular explanation' or 'non-probabilistic explanation'. What matters for my purposes is that the resulting principle remains conceivable and non-modal. (Note that Maitzen's proposal that we can explain why there are *any* contingent concrete things in terms of mundane facts about certain contingent concrete things (2013: 264) causes us no problem, for the explanandum in my argument is a fact about particular concrete things rather than the generic fact that there are any contingent concrete things.)

> Sentence Meaning: the meaning of a sentence includes the conditions of its truth and falsity.

Swinburne motivates Sentence Meaning from observations about our language use. Take a simple illustration. My two-year old says, 'There is a kitty.' I reply, 'No, that is a squirrel.' My reply reveals a condition of falsehood, and the effect is that my child gains a more accurate understanding of the meaning of 'There is a kitty'. In general, the more conditions or truth and falsehood we learn about a sentence, the more fully we grasp its meaning.

The next step in Swinburne's argument is to connect Sentence Meaning with a criterion for necessary truths. A necessary truth, he argues, is such that its sentential negation is self-contradictory. To say that a sentence is self-contradictory is to say this: anyone who fully grasps its meaning can see a priori that it entails a contradiction. Thus, we may put his proposal as follows:

> Necessary Truth: p is a necessary truth iff there is a sentence s that expresses the negation of p, where anyone who fully grasps the meaning of s can see a priori that s entails ~s.

The trip from Sentence Meaning to Necessary Truth is a walk in the park. Let n be any necessary truth. There are no conditions on which n is false. So by Sentence Meaning, the meaning of a sentence s that expresses n includes no conditions on which n is false. Therefore, anyone who *fully* grasps s's meaning can see that s cannot be true: for they can see that 's is true' contradicts the consequent of all possible truth-conditions built into the meaning of s. The result, in short, is that necessary truths can be seen to be necessary a priori.

What about so-called *a posteriori* necessities, such as 'Hesperus is Phosphorus' or 'water is H_20'? How can they be seen to be necessary a priori? Swinburne has an answer. What we discover a posteriori, he suggests, are the truth-conditions built into the meaning of the sentence in question. Take 'Hesperus is Phosphorus' as an example. The terms 'Hesperus' and 'Phosphorus' are what Swinburne calls 'uninformative designators'. Those terms designate an object, but they do not by themselves supply us with enough information about the designated object for us to see that they actually designate the same object. Through empirical observations, we learned that 'Hesperus is Phosphorus' is actually a statement of identity, which, like all statements of identity,

is necessarily true. Again, the very meaning of the sentence includes its truth conditions. So by discovering what those conditions are we thereby discover more about the meaning of the sentence. When we know enough about the meaning of 'Hesperus is Phosphorus' to see that 'Hesperus' designates the same object as 'Phosphorus', then from here we can see a priori that 'Hesperus is Phosphorus' is true. Therefore, 'a posteriori' necessities are not counterexamples to Necessary Truth.

The final step is to show that 'there is a necessary being' is not a necessary truth. Here is Swinburne's reasoning. Suppose there is a necessary being. Then 'there is no necessary being' is self-contradictory, according to Necessary Truth. Therefore, 'there is no necessary being' entails 'there is a necessary being'. But surely the mere non-existence of something cannot entail the existence of something. So: the initial assumption that there is a necessary being is false. There is no necessary being.

Reply:

In my judgment, the final step of Swinburne's argument is the most problematic. I realize that the first step – which involves justifying Sentence Meaning – may raise red flags for some. But we may treat Sentence Meaning as expressing a stipulation on what Swinburne *means* by 'meaning'. Swinburne himself identifies meanings with truth-conditions (2012: 345). So Sentence Meaning is actually true by definition: by seeing what he means by 'meaning', we see that the negation of Sentence Meaning entails a self-contradiction. The next step also seems to follow from the meaning of terms: if Sentence Meaning is true, then sentences that express necessary truths include *in their meaning* the fact that they are true on all possible conditions.

But the third, final step is vulnerable to a parity problem. Consider the following reasoning. Suppose there is no necessary being. Then it is not possible that there is a necessary being (assuming S5). It follows that 'a necessary being exists' is self-contradictory, according to Necessary Truth. Therefore, 'a necessary being exists' entails 'there is no necessary being'. But surely the mere existence of something cannot entail the non-existence of something. So: the initial assumption that there is no necessary being is false. There is a necessary being.

The above argument is exactly parallel to Swinburne's argument. Both arguments appeal to Necessary Truth in the same way. The weakest link in each argument is the premise about entailment. The parallel argument

has it that existence doesn't entail non-existence, while Swinburne's argument has it that non-existence doesn't entail existence. Neither premise is more plausible than the other. So the arguments are awash.

There is more. Anyone who wishes to defend the semantic objection faces the following dilemma: either (i) the sentence 'necessarily, there is an x, such that $x = x$' is self-contradictory, or (ii) it is not. Both options are problematic, however.

Suppose, first, that (ii) is true. Then by Necessary Truth, it is actually *possible* that it is necessary that there is something – that there is an x, such that $x = x$. But that implies that it is necessary that there is something (given S5),[9] which contradicts the conclusion of Swinburne's argument.

So suppose instead that (i) is true: the sentence in question is self-contradictory. Then, if Swinburne's semantic objection is sound, it follows that it is part of the *meaning* of 'necessarily, there is an x, such that $x = x$' that there are no conditions on which it is true. But how could that be? The sentence carries no such meaning on any ordinary sense of the term 'meaning'. Moreover, if we allow an unordinary – or stipulated – meaning of 'meaning', then we are left without a non-question-begging way to justify that (i) is true. The very reasoning Swinburne uses to justify the possibility that there is no necessary being is applicable here. For that reasoning can be reversed to construct a parity argument: just replace 'there is a necessary being' with 'there is no necessary being' and observe that neither is prima facie more likely to be self-contradictory. So at best the semantic objection ends in stalemate.

In reply to all of this, perhaps Swinburne could insist that those of us who grasp the meaning of 'necessity' that he has in mind will be able to see a priori that it is not necessary that there is something. On this basis, they may infer that 'necessarily, there is an x, such that $x = x$' is indeed self-contradictory (given Sentence Meaning). Furthermore, they may infer that there is no necessary being.

Is there a notion of 'necessity' on which one can see a priori that nothing is necessary? If there is, it is far from evident that such a notion is characterized by S5. Consider that there are S5-based arguments in the literature for the necessary existence of *propositions* (see: Plantinga 2003, Carmichael 2010, and Rasmussen 2014: 87-105), and Swinburne admits that his argument is in trouble if there are necessary propositions (2012: 259). Yet, Swinburne doesn't tackle any of these arguments. If one

[9] See note 7 for the deduction.

is to successfully argue that 'there is nothing necessary' follows from definitions of terms, it would greatly help to have a diagnosis of where the S5-based arguments for necessary propositions go wrong. And more importantly, we should be able to show that 'necessarily, there is an x, such that $x = x$' is self-contradictory. I don't see a way to extract these further results from the semantic objection. So far it hasn't been done.[10]

The Problem of Subtraction

Recent metaphysics gives us a new argument against the necessity of God's existence. It is the so-called 'subtraction argument', which is designed to show that concrete things could be subtracted, one by one, until there are none.[11] We may state a version of the argument as follows:

C1 (Finite): Possibly, there is a finite number of concrete things.

C2 (Subtraction): For any finite number of concrete things there might be in total, there could be fewer concrete things.

C3 (Leap): If Finite and Subtraction are true, then there is no necessary being.

C4: Therefore, there is no necessary being.[12]

There is a way to find each premise plausible. Start with Finite, which says that there could be a finite number of concrete things. I see a couple ways one might motivate this premise. First, there is an argument from conceivability. It may seem we can coherently conceive of a finite number of concrete things: imagine, for example, two blue spheres with nothing else. If conceivability is evidence of possibility, then it may seem we have evidence here that there could have been a finite number of concrete things. Second, there are the 'paradox-based' arguments against the possibility of an infinite number of concrete things. These arguments attempt to show that if there were an infinite number of concrete things,

[10] I have been granting for the sake of argument Swinburne's criterion for necessary truths. But for a recent mathematical challenge to that criterion, see Pruss 2015.

[11] See, for example, discussions by Baldwin (1996), Lowe (2002), Paseau (2002), Rodriguez-Pereyra (1997, 2000, 2002, 2013), Cameron (2006, 2007), Efird, et al. (2005, 2006, 2009), and Hoffman (2011).

[12] Versions of the subtraction argument that treat 'concrete' as synonymous with 'spatially situated' pose no obvious threat to the necessary existence of God, since God is classically understood as a non-spatial object. But I am assuming for our purposes here that *causal-capacity* is sufficient for concreteness.

then certain absurd – apparently impossible – situations would be possible.[13] So there are routes to premise 1.

The second premise – Subtraction – falls out of a principle of 'modal continuity'.[14] The basic thought is that any finite lower bound on the number of possible concrete things would be completely arbitrary. To help us appreciate this point, suppose there are exactly four blue spheres. This number of spheres is not a necessary number. After all, someone could create five blue spheres, perhaps out of playdoh. But if it isn't necessary that there are four blue spheres, then it equally isn't necessary that there are three blue spheres. By this same reasoning, it seems there is no finite number, such that it is necessary that there is exactly that number of blue spheres. Moreover, it seems there is no number, such that it is necessary that there is *at least* that number of blue spheres. There could be any number of blue spheres, including 2 or 1 or none. If we suppose instead that 3 is the least number of blue spheres there could be, then the lower limit on blue spheres is intolerably arbitrary. In this case, modal continuity is broken without any justification. Similarly, if there is some finite number of concrete objects, such that there could be no fewer, then the lower limit on concrete objects is intolerably arbitrary. Again, modal continuity is broken without justification.

One may also motivate Subtraction by inductive reasoning. We observe that for any type of concrete thing, instances of that type can be removed from reality. For example, there can be fewer cars, fewer trees, fewer planets, fewer Helium atoms, fewer solar systems, and so on. Subtraction predicts these observations, and it is far from clear that there is a competing, more virtuous principle (in terms of simplicity, predictive power, etc.) that predicts these same observations. So, one might infer that Subtraction is a plausible generalization from many cases.

Turn, next, to Leap, which connects the previous two premises with the conclusion that there is no necessary being. Leap is easy to demonstrate using mathematical induction. Here is that demonstration. Suppose Finite is true. Then there is a finite number k, such that there could be k concrete things in total. Let P(n) = 'there could be k - n concrete things in total, where $k \leq n \leq 0$.' The base case, where $n = 0$, is true by hypothesis. The inductive step follows from Subtraction: if it is

[13] See, for example, Craig & Sinclair 2011: 106–16.

[14] Rasmussen (2014) introduces and defends a principle of modal continuity as a guide to possibility.

true that there could be $k - n$ concrete things in total, then it is true that there could be $k - (n + 1)$ concrete things in total, where $k - (n + 1)$ is finite. It follows, therefore, that P(n) is true in the case where $n = k$. In other words, it follows that there could be zero concrete objects in total. But if there were a necessary being, then there would necessarily be at least one concrete thing. Therefore, there is no necessary being.

Reply:

As with the previous two arguments against the existence of a necessary being, the subtraction argument faces a 'parity' problem. The problem, basically, is that the same sort of reasoning used to support the subtraction argument can be used to support a parallel argument for a necessary being. Here is the parallel argument:

> D1 (Finite 2): Possibly, there is an explanation of there being at least n concrete things, for some finite n.
>
> D2 (Subtraction 2): For any finite number n, if there could be an explanation of there being at least n concrete things, then there could be an explanation of there being at least n - 1 concrete things, where n - 1 is a positive number.
>
> D3 (Leap 2): If Finite 2 and Subtraction 2 are true, then there cannot be zero concrete things.
>
> D4: Therefore, there cannot be zero concrete things.

There is a way to find each premise plausible. Start with Finite 2, which says that there could be an explanation of there being at least a certain number of concrete things. So, for example, suppose a factory produces one billion cups. Then the operations of the factory explain why there are at least one billion concrete things.[15]

The second premise – Subtraction 2 – falls out of the principle of modal continuity. The basic thought is that any finite lower bound on how many things could be explained would be completely arbitrary. To help us appreciate this point, suppose there is an explanation of why there are at least four blue spheres. That seems possible: imagine, for example, a factory producing four blue spheres. In this example, we used the number four. But the scenario is no less plausible on any other finite

[15] I intend a tenseless reading of 'are'. Thus, when I say 'there are at least one billion cups', I mean to quantify over all cups that there have ever been, presently are, or ever will be.

number. Suppose instead that although there can be an explanation of why there are at least four blue spheres, there *cannot* be an explanation of why there are at least three blue spheres. Then we have an intolerably arbitrary modal boundary. In this case, modal continuity is broken without any justification. Similarly, if there is some finite number of concrete objects, such that there could not be an explanation of there being at least that many concrete things, then we have an intolerably arbitrary modal boundary. Again, modal continuity is broken without justification.

One may also motivate Subtraction 2 using a principle of induction. We observe that for any number of concrete things of any type, there is an explanation available for why there is at least that number of concrete things of that type. For example, there are explanations available for why there are at least various numbers of cars, trees, planets, Helium atoms, solar systems, and so on. Subtraction 2 predicts these observations, and it is far from clear that there is a competing, more virtuous principle (in terms of simplicity, predictive power, etc.) that predicts these same observations. So, one might infer that Subtraction 2 is a plausible generalization from many cases.

Turn, next, to Leap 2, which connects the previous two premises with the conclusion that there cannot be zero concrete things. Here is the reasoning behind Leap 2. First, it follows from the above premises (via mathematical induction) that there can be an explanation of there being at least one concrete thing. Second, the only possible explanation of there being at least one concrete thing is that there *cannot* be fewer concrete things. Therefore, there cannot be zero concrete things.

Someone may object that there is another way to explain why there is at least one concrete thing. For example, one might think that it is objectively unlikely for there to have been no concrete things, and that this unlikelihood explains why there is at least one concrete thing. So Leap 2 is false.

But this objection doesn't get at the heart of the parity argument. Although there may be many ways to explain a given fact, we may explicitly build into Subtract 2 the relevant notion of explanation, such as non-probabilistic and non-circular. The motivations for Subtract 2 (i.e., modal continuity and induction) are no less compelling on this more precise reading.

From all these premises we get the parity conclusion: there cannot be zero concrete things. This conclusion cannot be true if the original

subtraction argument is sound. For if that argument is sound, then there can be zero concrete things. So either the subtraction argument is unsound, or this parallel argument is unsound. Once again we've reached a stalemate.

To break the stalemate, it seems we need some way to see that the original subtraction argument is superior to the parallel argument. It is true that less work is required to defend the subtraction argument's Leap than is required to defend Leap 2. But this work is surely more than offset by the extra work required to defend Finite. After all, it is far more controversial that there cannot be an infinite number of concrete things than that there can be an explanation of there being at least four concrete things (say). In any case, anyone who wishes to press the subtraction argument against a necessary being faces the challenge of showing that no parallel argument for an opposite conclusion is as good. They face the parity problem.

III. OFFENCE

I will close this article by getting on the table a new strategy for arguing for God's necessary existence. The strategy, in a nutshell, is to motivate an instance of the following 'explanation-based' argument schema:

P1. If there is any necessary concrete thing, then God necessarily exists (if God exists).

P2. There is a necessary concrete thing.

P2.1. Any possible state of type T *can* be explained.

P2.2. There is a possible state of type T that cannot be explained unless there can be a necessary concrete thing.

C2.1. Therefore, there can be a necessary concrete thing.

P2.3. If there can be a necessary concrete thing, then there is a necessary concrete thing.[16]

C2.2. Therefore, there is a necessary concrete thing.

C. Therefore, God necessarily exists (if God exists).

There is a way to find each premise plausible. P1 falls out of a minimal conception of God as the ultimate source of all other concrete things.

[16] This premise is a theorem of modal system S5 (if concrete things are essentially concrete). See note 7 for a proof.

For if God exists and there is a necessary concrete thing, then in every world where God exists, either God is identical with that necessary thing or God is that necessary thing's cause. In the first case, God is a necessary thing, after all. And surely if God is the *cause* of a necessary thing, then God is also a necessary thing. So, in either case, it seems God is a necessary thing, if there is any necessary thing.[17]

The more controversial premise is P2. Yet one may find support for it from recent developments in modal cosmological arguments.[18] For example, my 'new' argument for a necessary being (2011) can be converted into an instance of the above schema, if we let T = 'state of a property beginning to be exemplified' (cf. Turri 2011). Other Ts include, for example: 'state of contingent existence' (cf. Rasmussen 2010), 'contingent state of concrete particulars' (cf. Weaver 2013), and 'state of things coming into existence' (cf. Pruss & Rasmussen Forthcoming).

One advantage of all these arguments is that, unlike traditional cosmological arguments for a necessary being, they do not require that any state of reality is, or must be, caused or explained. Each argument makes use instead of a premise about what states are *possibly* explained.

More importantly, modal explanation-based arguments do not fall prey to the sort of parity problems that afflict arguments against a necessary being. Consider that the soundness of a modal cosmological argument is fully compatible with the possible *failure* of an explanation for a given T. For example, it could be that there is no explanation of the exemplification of *being a contingent concrete thing* in our world, while in some other possible world there is such an explanation. The parity problem is not on the porch of these arguments.

Perhaps someone will devise a clever parallel argument for every instance of the explanation-based schema. The challenge here, however, is to find a parallel argument whose soundness is evidently *as plausible* (not ad hoc, etc.) as the original. I have no idea how that challenge could be met, but I leave it as an open challenge.

I conclude, then, that the inquiry into which Ts may generate plausible instances is wide open. Parity problems block the main objections to God's necessary existence, as I have argued. Meanwhile, recent modal

[17] This argument is given in Pruss and Rasmussen Forthcoming.

[18] I am thinking here of arguments given by, for example, Gale & Pruss (1999), Turi (2011), Weaver (2013), Pruss and Rasmussen (Forthcoming), and Rasmussen (2010, 2011).

cosmological arguments open up a new way to argue for the necessity of God's existence.[19]

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[19] Many thanks to Philip Swenson, Alexander Pruss, and Richard Swinburne for their helpful comments on various portions of this article.

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