

IN GOD WE TRUST. OR WHY THIS ARGUMENT FOR CAUSAL FINITISM SHOULD
NOT CONVINC THEISTS

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Abstract: Causal finitism claims nothing can have an infinite causal history. An influential defense of this position uses infinity paradoxes to argue that, if causal finitism is false, several impossible scenarios would be possible. In this paper, I defend that theists should not be persuaded by this argument. If true, this is an important development, since causal finitism is often argued for by theists as a core premise in Kalam-style cosmological arguments for theism. I extend the same analysis to an argument in favor of temporal finitism and conclude that my point may generalize to any reasoning of a similar structure.

Key terms: causal finitism, theism, God's existence, Kalam cosmological argument, philosophy of religion

1. Introduction

The Lord is on my side; I shall not fear. What can infinite grim reapers do unto me?

Psalm 118, 6 (in some possible world)

Causal finitism is the thesis that nothing can be preceded by an infinite number of causes; or in other words, that nothing can have an infinite causal history. As such, it is more modest than finitism, the thesis that there can be no actual infinities of any kind, since it only rules out infinite *causal* histories.¹ Recently, causal finitism has been defended most ably by Alexander Pruss, who argues for it being the best available solution to a considerable number of infinity paradoxes, many of them drawn from the work of José Benardete.² If causal finitism can kill so many paradoxes in a single swipe, explaining with an elegant and unified

hypothesis why they represent impossible situations, *and* if there is no equal or better competitor, this is seen as plausible enough evidence in its favor.

Causal finitism has attracted considerable attention in the last years, especially in the philosophy of religion, given how it can be used as a key premise in Kalam-style arguments for the existence of God.³ The Kalam cosmological argument denotes a family of theistic arguments that purport to arrive to the existence of God either from the finitude of the past (and hence, the beginning of the universe) or else more generally from the finitude of so-called linear or accidental causal series: series of causes ordered in a successive and non-simultaneous way, like that of fathers and sons.⁴ Indeed, causal finitism, conjoined with the seemingly innocuous theses that “There is some cause” and “There is no circle of causes”, yields the conclusion that there is some first uncaused cause. This, in turn, is argued to be most plausibly the God of traditional theism.⁵

The main argumentative strategy related to establishing causal finitism in the context of Kalam arguments is Alexander Pruss’s strategy, which consists in arguing that, if causal finitism were false, then an impossible scenario would be possible; since this cannot be the case, causal finitism is true. In this paper, I will argue that theists should not be persuaded by this line of argument in support of causal finitism, precisely because of their background commitment to the existence of God, defined (minimally) as a necessary, omnipotent, and perfectly rational being. I will also argue that this conclusion can be extended to Robert Koons’s argument for temporal finitism and, in general, to any other argumentative strategy one might want to construe to “bridge” the gap between the possibility of a controversial something (like infinite causal series or an infinite past) and the possibility of impossible paradoxical scenarios. Hence, unless other more direct strategies are available, theists should remain unpersuaded about causal finitism.

If I am right, this is a significant and interesting development with the potential of moving the discussion forward, since, as I said above, causal finitism is mainly argued for by theists as a core premise in an argument for God's existence. If theists should remain unpersuaded about causal finitism, they cannot use causal finitism to rationally justify their theistic belief. Additionally, this would make the use of causal finitism in arguments for the existence of God rationally suspicious, given how the conclusion of the argument undercuts the main justification for one of its premises.

2. Alexander Pruss's Strategy

Meet Fred. He is a nice fellow with a tragic destiny ahead: infinitely many grim reapers (GRs) are disposed to kill him after 10.00. GR #1 is set to activate at 10.30, GR #2 at 10.15, GR #3 at 10.07⁵, and so on and so on, such that there is a last GR (GR #1, at 10.30), but no first GR. Each GR is programmed to behave according to the following instructions: when its time arrives, it checks to see whether Fred is dead or alive; if Fred is alive, it kills him instantaneously; if Fred is dead, it does nothing. Also, Fred can only be killed by the hand of a GR.

Let's ask the hard question: is Fred alive at 11.00? Certainly not! He must be dead; he cannot survive an infinite number of GRs. If by some reason Fred were alive at 11.00, he would have been alive at 10.30 and then GR #1 would have killed him. So, it is impossible for Fred to be alive. But... which particular GR killed him? And the paradoxical answer is that *none* did, for none can!

Suppose GR #1 killed Fred. That would mean Fred was alive at 10.30. But if Fred was alive at 10.30, then he was also alive at 10.15, in which case GR #2 would have killed him, not GR #1. But then, if Fred was alive at 10.15, he was also alive at 10.07⁵, in which case

GR #3 would have killed him, not GR #2. This reasoning generalizes to all GRs, so that we get the conclusion that *no* GR can kill Fred. But then, given that Fred can only die by the hand of a GR, at 11.00 Fred cannot be dead: he must be alive. And so, we get a contradiction: it is impossible for Fred to be alive, and it is impossible for Fred *not* to be alive.

Causal finitism kills the grim reaper paradox (and many similar ones). Indeed, we get to construct the paradoxical scenario by assuming, among other things, the possibility of infinite causal series. By adopting causal finitism, then, we rule out such a scenario as metaphysically impossible, and we get to understand why it delivers a paradox: it is no surprise that we should get strange, paradoxical, or even contradictory results if we start by assuming the possibility of something which is, in fact, impossible. So, causal finitists say, this is evidence in favor of causal finitism, just in case there is no better competitor.

But is there not? One alternative stands out: the so-called Unsatisfiable Pair Diagnosis (UPD), defended by Nicholas Shackel.⁶ Shackel notices that Benardete paradoxes, like the GR paradox, all share the same abstract form, involving the conjunction of two jointly incompatible (unsatisfiable) conditions: the *Unbegun Condition (UC)* and the *At iff Nowhere Before Condition (ANBC)*. A set *S* is *unbegun* (and hence satisfies *UC*) if it has no first member, that is, if for any *x* that belongs to *S* there is a *y* in *S* that is in some sense before *x*. On the other hand, a set *S* satisfies the *ANBC* condition if, for any *x* that belongs to *S*, *x* satisfies a predicate *P* if and only if no *y* in *S* before *x* satisfies *P*. The grim reaper paradox is a clear example of the conjunction of these two conditions: for any GR, there is another GR before him (the *UC* condition), and for any GR, that GR satisfies the predicate “kill Fred” if and only if no GR before him satisfies it (the *ANBC* condition).

What Shackel shows is that these two conditions are jointly unsatisfiable, that is, that nothing could satisfy both at the same time, precisely because they logically entail a

contradiction. For all we know, there could be an unbegun set (even an unbegun *causally ordered* set, contrary to causal finitism), but such a set could not possibly at the same time *also* satisfy the *ANBC* condition, and vice versa. To put it plainly, what defenders of UPD argue is that the situations described in Benardete-style paradoxes are impossible *simply because* they entail a contradiction. As Joseph C. Schmid and Troy Dana have put it, “while *UC* and *ANBC* may be *individually* possible, their *conjunction* is simply impossible, *end of story*.”⁷ Nothing more is needed; specifically, there is no need to deny the possibility of infinite causal series: the GR scenario would be impossible *even if causal finitism were false*; its impossibility has nothing to do with the supposed impossibility of infinite causal series. It is impossible *simply because* a contradiction follows from it, *and that’s all*.

Pruss himself considers UPD “a very powerful response to the argument for causal finitism.”⁸ Thus, what the causal finitist needs here, and what Pruss tries to offer, is an argument for the idea that *If causal finitism is false, then the paradoxical GR scenario is possible*. And it is precisely Pruss’s argumentative strategy for *this* claim that I contend should be unpersuasive to theists. Let’s see why.

3. God entered the chat

Consider the following modified GR scenario. Everything is the same as in the paradoxical GR scenario *except* that now we have a first GR at 10.00. Let’s call him GR-prime. GR-prime has a toggle incorporated that can be switched *on* and *off*. Currently, the toggle is *on*. Now, there is no contradiction in this scenario, and hence no impossibility. At 10.00, GR-prime kills Fred; as a result, all remaining GRs see that Fred is dead when they check on him and, so, they do nothing. Thus, Fred is dead at 11.00, which is tragic in its own right but not as

much as a true contradiction.⁹ What is Pruss's argument against UPD, then? In essence, the following:

- (1) If causal finitism is false, then the modified GR scenario is possible.
- (2) If the modified GR scenario is possible, then the paradoxical GR scenario is possible.
- (3) The paradoxical GR scenario is not possible.
- (4) Hence, causal finitism is true.

(1) seems intuitive enough: if there could be infinite causal series, there does not seem to be any reason to suppose the modified GR scenario should be impossible. After all, no contradiction is to be found in it! As for (3), everybody grants it (unless one wants to deny the law of non-contradiction). Hence, it seems that the defender of UPD is committed to denying (2): if causal finitism is false, one could have the modified GR scenario, but there could be no way of transforming it, so to speak, into the paradoxical GR scenario. In other words, there is no modal "bridge" between the non-paradoxical and the paradoxical scenarios that would allow one to go from the possibility of the former to the possibility of the latter.¹⁰

But intuitively, so Pruss's argument goes, it should not be difficult to transform the modified GR scenario into the paradoxical one. Suppose I enter Fred's room at 9.30 and see GR-prime next to him, getting ready to strike. It should not be hard for me to switch his toggle *off* and leave it that way. To do so, I need only walk a few meters and switch a toggle, which I ordinarily can do. It seems odd to say that I could not possibly switch GR-prime's toggle. After all, I could be playing with it for half an hour, switching it *off* and *on*, *off* and *on*, *off* and *on*, etc., finally leaving it *on* at 9.59'99, and no impossibility would follow. But if I could do that, what "strange metaphysical force"¹¹ would prevent me from switching it *off* one more time, or refraining from switching it back *on* at the last second?¹²

As Pruss acknowledges, the reasoning is similar to the one that some people use to deny the metaphysical possibility of time travel.¹³ If time travel were possible, it seems I could realize a time-traveling paradox: I could go on and kill some old ancestor of mine or kill myself as a baby. After all, I would only need to pull a trigger, push a person down some stairs, set a room on fire, or kidnap my father on the night I was conceived. I can ordinarily do all these things (though I don't do them, be assured), so it seems odd and mysterious to suppose I could not possibly do them *if* I were able to travel to the past. Again, what strange metaphysical force would prevent me from doing these things? Hence, such philosophers say, this is evidence against the possibility of time travel, for it is also clear that I could not possibly do these things, for if I did, I would realize a paradox, which is impossible.

At this juncture, it may be obvious what my point will be. *Theists* should not find this argument for (2) convincing, for they already believe, as part of their background ontological commitments, in the existence of an agent that could perfectly play the role of such a paradox-preventing metaphysical force. After all, the theist believes in God, defined minimally as a *necessary, omnipotent, and perfectly rational agent*. Given his necessity, God exists in all possible worlds (so to speak, there is no need to go full-Lewisian on this); given his perfect rationality, God would be most inclined to prevent any contradiction from being actualized; and given his omnipotence, God could not possibly fail to prevent it. Hence, the theist has an easy and ready response to Pruss's strange metaphysical force question: the strange metaphysical force that would prevent the modified GR scenario from being transformed into the paradoxical GR scenario would be God himself!¹⁴

God could do this in any number of ways. Maybe he allows me to play with the toggle for half an hour, and then strikes me down with a heart attack at 9.59'99, just when I am about to turn GR-prime *off* for the last time. Maybe he simply switches the toggle back *on* at the last moment. Maybe he miraculously leaves the toggle stuck on the *on* position. Maybe he gives

me vertigo and makes me faint each time I try to approach GR-prime. Maybe he prevents me from getting into the room altogether. Who knows!¹⁵ What seems clear is that God *could* and *would* necessarily prevent any contradiction from being realized. Given theism, there can be no possible world where God allows me to bring forth a paradox. And so, the background commitment the theist has with the existence of God destroys any modal bridge between the possibility of non-paradoxical scenarios and paradoxical ones. The existence of a necessary, omnipotent, and perfectly rational agent *simply ensures* no such bridge can be built.¹⁶

It also seems very natural for a theist to think in this way. An analogy might help see the point. In Catholic doctrine, the Pope is infallible in matters of faith and morals when certain conditions are met, such as when he speaks *ex cathedra* (what this consists in should not bother us at the moment). This means that, if Catholicism is true, it is literally impossible for the Pope to teach *ex cathedra*, for instance, that Mary is a divine person and that the Trinity is, in fact, a Quaternity, contrary to the whole of Christian tradition (and contrary to other dogmatic infallible statements). According to Catholic doctrine, there is simply no possible world where Catholicism is true *and* such a thing occurs.

However, for the Pope to teach heresy *ex cathedra*, he would simply need to do things which he *ordinarily* can do and has no difficulty in doing. Ordinarily, the Pope can write documents, he can promulgate them, he can convene a Council, he can set up a microphone in the balcony of St. Peter and solemnly declare something, etc. Still, the Catholic is committed to the idea that it is metaphysically impossible for the Pope to do any of these things *and* teach the heretical doctrine of the Quaternity. But why? What strange metaphysical force could prevent the Pope from doing so if he wanted to? The Catholic answers: God himself, for sure! God, so the Catholic must think, would not let that happen, he would always intervene to prevent it (again, heart attacks don't seem that difficult to cause for an omnipotent being).¹⁷

But this same reasoning is the one I defend the theist should have in mind when confronted with Pruss's argument against UPD. And so, absent any other argument in favor of causal finitism, the theist should remain unconvinced of (2). *Maybe* the non-theist unconvinced of UPD should become a causal finitist, or even directly a theist (because theism has a nice theory of that "strange metaphysical force" that could prevent paradoxes from being realized). My only point is that *the theist* should simply go with UPD. Indeed, all things considered, that seems the natural position for a theist to take.

Now, Pruss considers a version of this objection when discussing the compatibility of causal finitism with theism. He writes:

The necessary existence of a perfect being imposes limits on what is possible. For instance, if such a being exists, it is impossible for there to be unredeemed evils so bad that it would be wrong for a perfect being to permit them. But such limits also limit the applicability of the kinds of rearrangement arguments that have been heavily used in this book. (. . .) Theism, thus, requires rejection of the idea that mathematically coherent modifications of possible arrangements are always going to be possible. But that idea seems important to a lot of the arguments in this book.¹⁸

How does Pruss address this worry? He writes: "it is very plausible given theism that the plausible limits that theism places on modifications of arrangements will be based on one of two aspects of divine perfection."¹⁹ These two aspects of divine perfection are, according to Pruss, (A) that everything but God is created by God, and (B) God's moral perfection. Pruss rightly brushes off (A) as irrelevant, "since none of the main arguments depend on uncreated entities."²⁰ As for (B), Pruss recognizes that "[t]his puts limits on examples involving suffering,"²¹ like that of the die-guessing game.²² Nonetheless, he argues that such scenarios "can be modified to make it possible for a perfect being to allow them,"²³ so not much is lost.

It seems to me, though, that Pruss fails to consider the limits that God's *perfect rationality* imposes on this kind of rearrangement arguments, as I have been arguing. Indeed, if anything seems plausible, it is the fact that a perfectly rational being would be most inclined to prevent and avoid any contradiction or rationality paradox to be actualized or instantiated. And being omnipotent, God would never fail to do so. But then, it seems that someone with a background commitment to the necessary existence of an omnipotent and perfectly rational being should think it impossible for any non-paradoxical scenario to be possibly transformed into a paradoxical one.

For instance, let's go back to the time-traveling case. Being omnipotent, God would certainly be in a position to prevent me from killing myself as a baby, even if He were to allow me to travel back in time. And being perfectly rational, he would certainly do so, in a myriad of creative ways. So, it seems to me the theist should not find it plausible that, if I could travel back in time, *then* I could kill myself as a baby. For all the theist knows, time travel might be metaphysically possible. What would certainly be impossible, given the existence of a necessary, omnipotent, and perfectly rational being, would be to instantiate a time-traveling paradox, *even if* I could travel back in time.

But the same reasoning applies to Pruss's rearrangement argument. Being omnipotent, God would certainly be in a position to prevent any non-paradoxical scenario of being transformed into a paradoxical one. And being perfectly rational, he would certainly do so, in a myriad of creative ways. So, once more, it seems the theist should not find it plausible that, if causal finitism is false, *then* a paradox would be possible. After all, if God's perfect goodness puts limits on the possibility of rearrangements involving evil and suffering, why should one suppose God's perfect rationality does not put limits on the possibility of rearrangements ending up in paradoxical and even contradictory scenarios?

5. Robert Koons's Patchwork Principle Strategy for Temporal Finitism

So much for Pruss's argumentative strategy in favor of causal finitism. Let's move on to Robert Koons's strategy for temporal finitism. Koons has argued for the necessary finitude of the past from the idea that, if the past were possibly infinite, a paradoxical version of the GR scenario (the Grim Placer paradox) would also be possible. The paradoxical scenario goes as follows.²⁴

Suppose there is a GR each year in the infinite past: GR #1 in 1 BC, GR #2 in 2 BC, GR #3 in 3 BC, and so on. Each GR has the following mission: at the beginning of his year, each GR creates a particle and places it at a certain spot *if and only if* no other particle is already placed by an earlier GR at his corresponding spot. At 1 AD, is there a particle at some spot? Certainly, yes: some GR must have acted; on the assumption that no GR acts, it is true that no GR before GR #1 acted, and so GR #1 acts. But which GR placed the particle? None can! Suppose GR #1 does. That means no GR before GR #1, but in that case, no GR before GR #2 acted either, which means GR #2 would have acted, not GR #1. This, once more, can be generalized for *all* GRs, and hence the conclusion is that none can place the particle. At 1 AD, then, it is impossible for there to be *no* particle nowhere, *and* it is impossible for there to be *a* particle somewhere. Contradiction.

Koons treats this as a *reductio* of the initial assumption of the possibility of an infinite past. We can put the argument in a similar way to Pruss's:

- (5) If an infinite past is possible, then the Grim Placer scenario is possible.
- (6) The Grim Placer scenario is not possible.
- (7) An infinite past is not possible.

Once more, the controversial premise (5) tries to build a “bridge” between the possibility of something controversial (the infinitude of the past) and the possibility of something uncontroversially impossible (the Grim Placer scenario). If an infinite past is possible, *then* an impossible thing is also possible. How does Koons argue for this point? Through a version of the Patchwork Principle that goes like this:

Infinitary Patchwork (PInf). If S is a countable series of possible worlds, and T a countable series of regions within those worlds such that T_i is part of W_i (for each i), and f is a metric and topology structure-preserving function from T into the set of spatiotemporal regions of world W such that no two values of f overlap, then there is a possible world W' and an isomorphism f' from the spatiotemporal regions of W to the spatiotemporal regions of W' such that the part of each world W_i within the region R_i exactly resembles the part of W' within region $f'(f(R_i))$.²⁵

Put simply, the Patchwork Principle states that, if some contained scenarios (single “patchworks”) are individually possible and there is a possible spatiotemporal framework to fit them all in, then any arrangement of those patchworks in such a spatiotemporal framework is also possible. For instance, if I know it is possible to go from my home to the store in 10 minutes and I know it is possible to go from the store to church in 20 minutes, then I can know it is possible to go from my home to the store and then to church in 30 minutes. PInf is just the application of this modal intuition to infinitary recombinations.

Now, start with the assumption that an isolated Grim Placer scenario is possible: there is some metaphysically possible world with a single GR with the power and will of creating a particle and placing it at a designated spot if and only if no previous GR has already done so. Next, introduce the assumption (for *reductio*) that an infinite past is possible: that there is some metaphysically possible world with no temporal beginning. PInf allows us to multiply

the isolated Grim Placer scenario onto such a possible infinite past, and hence the possibility of the paradoxical Grim Placer scenario follows. Three options are opened to the one considering the argument: (i) deny the possibility of an isolated Grim Placer scenario; (ii) deny the possibility of an infinite past; (iii) deny or qualify the Patchwork Principle. Koons argues the best option is (ii).

Be that as it may, my only point here is that *the theist* should be *prima facie* moved, because of his theistic background commitments, to choose option (iii): deny or qualify the Patchwork Principle. To the theist, there can be no modal bridge between the possibility of an infinite past and the possibility of the paradoxical Grim Placer scenario, at least appealing to Patchwork Principles. To see why, let's start by noticing that Koons himself already grants that some causal proviso might have to be added to the Patchwork Principle if used in the context of Kalam arguments.

Indeed, the traditional Kalam argument appeals to some version of the principle of causality, such that "If something has a beginning, it has a cause". But if the Patchwork Principle is left unrestricted, it becomes incompatible with the necessary truth of the Kalam causal principle. As Koons puts it:

Take a world in which some change is caused at time t , and take a second world in which there exists no possible cause of that change prior to t . The Patchwork Principle entails that there is a possible world like the first at and after t , and like the second before t , providing a counter-example to any Kalam causal principle.²⁶

Koons offers two possible responses. The first one consists in denying the necessary truth of Kalam causal principles. This, though, seems to come at the price of reducing the force of the Kalam argument, appearing to be the least attractive option for Kalam proponents. Koons offers a second and more Kalam-friendly possibility: adding "a Kalam proviso to the

Patchwork Principles, permitting the inference to possibility only in those cases in which all beginnings have adequate causes in the resulting patchwork scenario.”²⁷

So, it seems already plausible that the Patchwork Principle might need some tweaking from the theist’s perspective. But now consider that the tension between theism and unrestricted Patchwork Principles might be even greater. For, presumably (especially given traditional theism), there is a possible world with an endless future. But the following scenario is also individually possible (indeed, sometimes actual): a just and God-loving person suffering tremendously in this life for a finite period of time. If we take an unrestricted Patchwork Principle, we should conclude that there is a possible world where an infinity of just and God-loving people suffer tremendously through an endless future, with no remedy to their suffering. But certainly, *if* God exists, such a thing is not possible: there is no possible world where God allows the just to endure endless suffering for all eternity. So, it seems the theist can’t grant an unrestricted Patchwork Principle but needs to add to it some kind of proviso related to his background commitment to the existence of an omnipotent and perfectly good God.

Does this kind of qualification disallow for theists the use of the Patchwork Principle in Koons’s argument? It seems so. Recall that, according to Pruss, the first limit theism places on modification arguments “is that everything but God is created by God.”²⁸ Now take this together with God’s perfect rationality, and what seems to follow is that God would never create a world where a paradox such as the Grim Placer’s is instantiated. Hence, it appears the theist should think that the Grim Placer scenario is in fact impossible *even if* it is possible for the past to be infinite, contrary to Koons’s argument.

Suppose we qualified the Patchwork Principle in the following theism-friendly way: if scenarios S1, S2, etc. are individually possible, *and* if there is a possible world with enough

room to fit them all in an arbitrary arrangement, *then* there is also a possible world in which such scenarios are arranged in that way, *unless* God would prevent said arrangement from being realized. This qualified Patchwork Principle allows the theist to think that a world where an infinite number of just and God-loving people suffer tremendously for all eternity is not in fact metaphysically possible. The scenario of one just and God-loving person suffering tremendously for a finite period of time is individually possible *and* there is a possible world with an endless future, *but* God would certainly prevent such an evil arrangement from being realized.

Similarly, once the Patchwork Principle is modified in this way, the mere individual possibility of an isolated Grim Placer scenario taken together with the possibility of an infinite past does not suffice to conclude that there is a possible world in which the Grim Placer paradox is instantiated. To infer this through the modified Patchwork Principle, one would need to add that it is not the case that God would prevent such an arrangement from arising. But certainly, due to his perfect rationality, God *would* prevent such a paradoxical arrangement from arising. And so, the theist cannot use this theism-friendly Patchwork Principle to reduce to absurdity the possibility of an infinite past.

In other words, God could, for all the theist knows, create a world with no beginning, and hence the infinitude of the past is an open possibility. But what should be clear to the theist is that God would, under no circumstance, create a world with no temporal beginning where the Grim Placer paradox is instantiated. Hence, there may be possible worlds lacking temporal beginnings, but the theist can't legitimately apply the Patchwork Principle to derive from this the possibility of paradoxical scenarios, precisely because of his commitment to the necessary existence of an omnipotent and perfectly rational being who is the ground of everything else's existence. Once more, if God's perfect goodness puts limits on the use of Patchwork Principles, why should God's perfect rationality not do the same?²⁹

6. In conclusion

I have argued that theists should not be persuaded by the main line of argument in favor of causal finitism, because it relies on rearrangement intuitions that should be made moot by the theist's background commitment to the necessary existence of an omnipotent and perfectly rational being. I have argued that the same seems to follow for Robert Koons's argument for temporal finitism, that relies on a version of the Patchwork Principle. Theists already put limits on the use of Patchwork Principles because of God's perfect goodness; they should do the same because of God's perfect rationality.

Some conclusions may follow from this. First, and to reiterate, that theists should remain unpersuaded by this kind of argument. Second, that causal finitists who happen to be theists should move away from rearrangement arguments and focus their efforts on the idea that causal finitism is the best available solution to a huge array of diverse infinity paradoxes.³⁰ Third, that faced with rearrangement arguments, non-theists unpersuaded by UPD might either adopt causal finitism or else become theists altogether (maybe because of theism's ability to identify the "strange metaphysical force" doing the relevant preventing).

However, if they adopt causal finitism because of these rearrangement arguments, they should not then adopt traditional theism as the best hypothesis of the first cause. They might adopt some kind of modified theism, where God is contingent, or less than omnipotent, or less than perfectly rational. But full-blown theism would undercut the rationality of their previous argumentative steps. Hence, either one takes the causal finitist's argument to be sound, but then traditional theism is precluded because of it, or theism is not precluded, and then the argument cannot be sound. There does not appear to be a way of making this argumentative strategy consistent with theism.

More importantly, what seems to follow from all of this is that God’s perfect rationality will *always* be an impediment for arguments that want to go from the assumed possibility of something controversial (like causal infinitism, the infinitude of the past, but also time travel) to the possibility of something uncontroversially impossible (like a paradoxical scenario or a true contradiction).³¹ God will always get in the way. Because of his perfect rationality, God will be most inclined to dynamite any modal “bridge” of the sort. And because of his omnipotence, God will never fail to do so. *Ad maiorem Dei gloriam*.³²

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NOTES

¹ Notice that these include not only infinite causal series, but also infinite causal cooperation, where an infinite number of causes simultaneously work together to produce some effect, without being "linked" in an infinite backwards chain. Causal finitism wants to rule out both phenomena.

² See Benardete, *Infinity: An Essay in Metaphysics*; Pruss, *Infinity, Causation, & Paradox* and Pruss, "Paradoxes of infinity and the first cause," 9–20. Another interesting paper using little discussed paradoxes to establish causal finitism is Schmid, "A Step-By-Step Argument for Causal Finitism," 2097–2122.

³ See Pruss, *Infinity, Causation, & Paradox*, 181–192; Pruss, "Paradoxes of infinity and the first cause," 9-20; Koons, "A New Kalam Argument," 256–267; Koons, "The universe has a cause," 2–12; A. Loke, *The Teleological and Kalam Cosmological Arguments Revisited*, 204–205. I myself have used in the past the strategy discussed in this paper, to boost Aquinas's famous *De Ente* argument: see E. F. Gel, "La existencia de Dios," 298-301.

⁴ Linear as opposed to hierarchical causal series. The key distinction between the two is as follows. In a linear causal series, each member possesses the causality of the series in an intrinsic and non-derivative way: each father has in itself the power to bring forth a child; he can do so simply in virtue of the kind of thing that he is (a healthy adult human male). In contrast, posterior members of a hierarchical causal series derive their causality from prior members: for instance, the water derives the power to heat from the pot, which in turn derives it from the fire. Another difference is that, in a hierarchical series, the causality of the posterior members is *sustained* by the causal activity of the prior members, while this is not so in linear series (I don't need the causal contribution of my ancestors to procreate successfully, but the pot needs the causal contribution of the fire to keep heating the water). Kalam arguments typically want to arrive to God as the first cause in a linear kind of series, while other arguments (like Aquinas's *De Ente* argument) want to arrive to God as the first cause in a hierarchical kind of series (Aquinas, in fact, thought that the necessary finitude of linear causal series could not be established by

natural reason). For the distinction between linear and hierarchical series, see Feser, *Five Proofs of the Existence of God*, 20-24; Kerr, *Aquinas's Way to God*, 121–152 and the excellent Cohoe, “There Must Be a First,” 838–856.

⁵ See, for example, Pruss, *Infinity, Causation, & Paradox*, 181–192. If it can be reasonably established that the first cause is a necessary being, for instance, one can then run Ryan Byerly’s argument from necessary existence to absolute perfection. See Byerly, “From a necessary being to a perfect being,” 10–17. Also, as Robert Koons has argued, one can combine the discovery of a first cause with teleological arguments to defend that the first cause must be personal or intelligent. See Koons, “A new look at the cosmological argument,” 171–192.

Additionally, I have argued that theism has a considerable advantage as a theory of the first cause: see Gel, “How many and why?,” 846–856. For a critique, see Schmid, “Naturalism, classical theism, and first causes,” 64–77, and for a response, see Gel, “There can be only one,” 1–16. For the Kalam argument more generally, see Craig and Sinclair, “The *Kalam* Cosmological Argument,” 101–201.

⁶ See Shackel, “The Form of the Benardete Dichotomy,” 397–417.

⁷ Schmid and Dana, “Severing the case for finitism” (manuscript).

⁸ Pruss, *Infinity, Causation, & Paradox*, 48.

⁹ I’m developing what Pruss calls the Prefixed Grim Reaper story (see Pruss, *Infinity, Causation, & Paradox*, 49). There he also gives another modified GR scenario involving the infinite GRs freely setting their dials in a way that does not end up in the paradoxical scenario. I opted for the first one simply because I find it more intuitive and (why not) funnier.

¹⁰ Though some UPDist might want to deny (1) altogether if they find (2) and (3) plausible. Indeed, notice that the modified GR scenario implies the conjunction of the *ANBC* condition with (a) an infinite set *S* which is the union of an unbeginning set *S*’ and a single member set *S*” placed before all members of *S*’. Now, *ANBC* and (a) are *not* logically unsatisfiable, since no contradiction can be derived from their conjunction, unlike what happens with *ANBC* and *UC*. Still, if one grants (2) and (3), it follows that *ANBC* and (a) are jointly *metaphysically* impossible. Hence, the UPDist could deny (1) and claim that the modified GR scenario would be impossible *even if* causal finitism is false, *simply because* it represents the conjunction of two metaphysically jointly unsatisfiable conditions. *Some* infinite causal chains might be possible, but not those satisfying *ANBC* and (a). This, however, does not affect my main point in this paper: that theists should reject (2). At most, it might imply that my argument could be reformulated to claim that theists should reject either (2) *or* (1). I thank Joseph C. Schmid for this point.

¹¹ Pruss, *Infinity, Causation, & Paradox*, 49.

¹² Laureano Luna and Jacobus Erasmus make essentially the same “strange metaphysical force” point when discussing other paradoxes in favor of temporal finitism. See Luna, “Yablo’s Paradox and Beginningless Time,” 95 and Luna and Erasmus, “A Philosophical Argument for the Beginning of Time,” 167. More recently, Ibrahim Dagher appears to make the same move in defense of causal finitism, claiming that the impossibility of turning the first GR off in the Prefixed GR scenario is “problematically inexplicable” because a causal mechanism is lacking that could explain why each attempt at doing so necessarily fails. See Dagher, “An inexplicably good argument for causal finitism,” 209–210. My point, as will become apparent, is precisely that theists already have in their worldview the requisite causal mechanism that would explain these failings, and that, hence, they should not find these arguments persuasive.

¹³ See Pruss, *Infinity, Causation, & Paradox*, 61–63.

¹⁴ Some theists may want to downplay God’s omnipotence (famously, Jonas, “The Concept of God after Auschwitz”). Maybe *these* theists should find Pruss’s argument persuasive, for if God is not omnipotent in the strong sense, there would be a possible world in which God failed to prevent me from switching the toggle in the modified GR scenario. There may also be some theists who want to deny God’s necessity (for instance, Swinburne, *The Coherence of Theism*, 101–296). Maybe *these* theists should also find Pruss’s argument persuasive, for if God is not necessary, there might be a possible world with a modified GR scenario where God does not exist. Given that and the absence of other strange metaphysical forces, there might be a bridge to the possibility of the paradoxical GR scenario. (Though maybe contingentists about God should think that worlds without God also lack any other concrete things, in which case the previous point would be false. I thank Joseph C. Schmid for calling my attention to this). I know of no theist who wants to deny or downplay God’s perfect rationality, but the same would apply if they exist. In any case, *these* theists are a minority within theism.

¹⁵ Maybe God wouldn’t even have to bother with a direct and special intervention: after all, he could have set from the beginning the laws of physics in such a way that no paradoxical scenarios could arise. I thank an anonymous referee for bringing my attention to this possibility.

¹⁶ Maybe some theists would want to argue that, if transforming a non-paradoxical scenario into a paradoxical one depended on the indeterministic libertarianly free act of some creature (see Pruss’s second modified scenario in note 9), then God could not possibly avoid such a thing, for eliminating a creature’s free will would conflict with God’s perfect goodness. The problem is that there seem to be ample resources available to God for preventing the realization of paradoxical scenarios that do not imply suppressing a creature’s free will (the

examples given above don't do such a thing). God can simply prevent in a myriad of freedom-friendly ways the intended extrinsic effects of a creature's free action; that's all he needs. Or else, God can avoid putting libertarianly free creatures in situations where there would be a risk of generating a paradox because of the exercise of their free will.

¹⁷ Surely the non-Catholic has a similar thing in mind if he believes in the inerrancy of Scripture and the inspiration of its authors. Given the Christian God, there is no metaphysically possible world where Paul taught heresy in a letter and such a letter ended up in the canon of Scripture. Similar stories are available for non-Christians and even for merely philosophical theists.

¹⁸ Pruss, *Infinity, Causation, & Paradox*, 191.

¹⁹ Pruss, *Infinity, Causation, & Paradox*, 191.

²⁰ Pruss, *Infinity, Causation, & Paradox*, 191.

²¹ Pruss, *Infinity, Causation, & Paradox*, 191.

²² In this paradox, a person who plays a twisted game from all eternity can avoid being tortured infinitely many times by leveraging information from past rolls of an indeterministic, fair, and memoryless dice, denying the fallacious nature of the gambler's fallacy. See Pruss, *Infinity, Causation, & Paradox*, 93–98 and Pruss, "Paradoxes of infinity and the first cause," 14–15.

²³ Pruss, *Infinity, Causation, & Paradox*, 191.

²⁴ See Koons, "A New Kalam Argument," 256–267.

²⁵ R. Koons, "A New Kalam Argument," 258. For a recent and intelligent critique of Koons's use of the Patchwork Principle in the argument, to the effect that it conflicts with branching actualism, see Schmid and Malpass, "Branching actualism and cosmological arguments," 1–23.

²⁶ Koons, "A New Kalam Argument," 267.

²⁷ Koons, "A New Kalam Argument," 267.

²⁸ Pruss, *Infinity, Causation, & Paradox*, 191. Let's just bracket the discussion on the relation between God and abstract objects. We don't need to argue about that right now. Seriously.

²⁹ A similar response is available, I think, against Wade A. Tisthammer's clever Eternal Society argument. See Tisthammer, "An Eternal Society Paradox," 49–58. Tisthammer starts by assuming (for *reductio*) the possibility of an infinite past. He then argues that, if an infinite past were possible, an eternal society with the ability of ordinary humans that existed each year of the infinite past would also be possible. Such an Eternal Society has an Annual Coin Flipping Tradition, according to which each year they flip a coin such that, if the coin comes up

heads, they do a certain chant *if and only if* they haven't done the chant before; if the coin comes up tails, they don't do the chant. Next, Tisthammer argues that, if an Eternal Society were possible, then a certain non-paradoxical scenario S1 would also be possible. In S1, the coin came up heads last year for the first time and the Eternal Society did the chant. Now comes what I have called the modal "bridge": if S1 were possible, then a paradoxical scenario S2 would also be possible. In S2, the coin comes up heads *each* year of the infinite past. S2, however, entails a contradiction (the Eternal Society must have done the chant *and* they cannot have done the chant), and so is not possible. Hence, neither is S1 possible, nor an Eternal Society, nor an infinite past. Tisthammer links S1's possibility to S2's possibility because "The coin flips are probabilistically independent events. If it is possible for the coin to not come up heads each year until last year, then it would have also been possible for the coin to come up heads each year" (Tisthammer, "An Eternal Society Paradox," 55). But once more, it seems to me the theist should remain unpersuaded by this line of reasoning. Given his background commitment to a necessary, omnipotent, and perfectly rational being that creates everything else, the theist has a principled reason to think that S2 could not possibly occur, *even if* an infinite past and an Eternal Society with the Annual Coin Flipping Tradition were possible. God would simply not allow the coin flips to come up heads each year of the infinite past, or else He would interfere with the Eternal Society's tradition in a way that ensured the contradiction could never be instantiated.

³⁰ Though, to insist on the point of the paper, it seems it should not matter to the theist how many and how varied are the paradoxes the causal finitist can bring to the table. The theist should simply consider that the best available solution to all paradoxes is theism itself, with its commitment to a necessary, omnipotent, and perfectly rational being who would not allow for paradoxical situations to possibly emerge. So the point of my paper might even be able to be extended to the inductive strategy for causal finitism.

³¹ Another argument of the same structure that would seem to be undercut by my response would be the one using Tristram Shandy's paradox to establish the finitude of the past. See William Lane Craig's discussion of it in Craig and Smith, *Theism, Atheism, and Big Bang Cosmology*, 33-35 and 99-107. Once more, the theist should simply not believe that, if the past is possibly infinite, *then* it is possible that Tristram Shandy has always been writing his autobiography at the rate of one day per year. Interestingly, Wes Morriston argued for denying just this premise of the argument. See Morriston, "Must the Past Have a Beginning?," 14-17. The same would apply to anyone wanting to claim that, if the past is possibly infinite, *then* Hilbert's hotel would be possible (Andrew Loke seems to want to argue in this way in "No Heartbreak at Hilbert's Hotel," 202-205).

³² The idea for this paper came to me in conversation with Joseph C. Schmid. I thank him, Patrick Flynn and two anonymous reviewers for their helpful comments on an earlier draft of this paper.