Vol. 13, No. 2 PHILO Fall-Winter 2010

Against Multiverse Theodicies

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Abstract: In reply to the problem of evil, some suggest that God created an infinite number of universes—for example, that God created every universe that contains more good than evil. I offer two objections to these multiverse theodicies. First, I argue that, for any number of universes God creates, he could have created more, because he could have created duplicates of universes. Next, I argue that multiverse theodicies can't adequately account for why God would create universes with pointless suffering, and hence they don't solve the problem of evil.

1. Introduction

This article takes issue with a purported solution to two standard arguments against the existence of an omnipotent, omniscient, omnibenevolent being (a being which I'll call "God" for short). The first standard argument is the problem of evil: the fact that undeserving bad things happen to morally significant creatures is incompatible with, or at least provides strong evidence against, the existence of God.

The second standard argument is the problem of no best world. To see how this argument works, assume for reductio that God exists. For every world that God could actualize, God could have actualized a better world, since for any world there is, one could make it better by adding more goodness to the world. Hence, no matter what world God does actualize, he could have actualized a better one. It follows that God's goodness is surpassable, but that is incompatible with God's omnibenevolence, and hence there is no God.

The purported solution to these two standard arguments that I will be rejecting is the multiple-universe solution. The idea is that God created an

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infinite number of universes—he created every possible universe that he could create, above some threshold of goodness. (For example, he could have created every universe that has at least as much good as evil, or he could have created every universe that has more good than evil—I'll discuss various possibilities in the next section.) This purportedly solves the problem of no best world, since the world that God actualized includes all the different universes—this world is purportedly unsurpassable, since there are no more universes that God could create that would add to the goodness of reality. Moreover, this line of reasoning purportedly solves the problem of evil. Our universe, even though it has evil in it, is above the threshold, and hence is worth creating by God since it adds to the goodness of reality. It follows that the existence of our evil-containing universe does not provide evidence against the existence of God. At best it provides evidence for the disjunctive claim: either there is no God, or God exists and a multiverse theodicy is true.[1]

I, personally, am not convinced that the problem of no best world is really a problem for theism. However, for those who think that it is a problem, I will argue that multiverse theodicies do not successfully solve that problem, due to the ability of God to create more and more duplicates of universes that he's already created—no matter how many duplicates God creates, he could have created more. (As I'll explain below, the argument can also go through even if God can't create duplicates, but can create certain types of near-duplicates.) I will then show that this duplication concern is relevant to the problem of evil—because God could create duplicates of universes better than ours, there's no reason for God to create our universe, and hence multiverse theodicies don't solve the problem of evil.

In case this isn't yet clear: in my terminology, a "universe" is a collection of spatiotemporally connected things and events, and the "world" is all of reality. Hence the world can contain multiple universes. While events within a particular universe are spatiotemporally connected, an event in Universe *A* and an event in Universe *B* will have no spatial or temporal relationship between them. Moreover, all physically embodied things are universe-bound: for example, while a being similar to me (a counterpart of me) might exist in another universe, I only exist in this universe.

This view is compatible with understanding a world as a maximally consistent state of affairs, as long as the requisite states of affairs are appropriately indexed to universes. So, within a world, there can be a universe where Lincoln exists and a universe where Lincoln doesn't exist, but this doesn't generate contradictory states of affairs—the states of affairs of the world would include states of affairs of the form "Lincoln exists in Universe #17" and "Lincoln does not exist in Universe #18" (or at least, the states of affairs that are Universe #18-indexed would not include states of affairs of the form "Lincoln exists").

God creates universes, but God actualizes a world (since a world includes God, and God does not create himself). So when I talk about different "possible worlds," I'm talking about different ways reality could be—

some possible worlds contain a single universe, while other possible worlds contain multiple universes.

This paper will build to an argument that multiverse theodicies don't solve the problem of no best world, and from there to an argument that multiverse theodicies don't solve the problem of evil. But we'll start with some (hopefully interesting) preliminary discussions. First, I'll take up the issue of what the axiological threshold is: which universes would God deem worthy of creation? Then, I'll discuss Hudson's "plentitudinous hyperspace" version of a multiverse theodicy. Next, I'll take up three objections to multiverse theodicies that I'm ultimately setting aside. Specifically, I'll discuss whether multiverse theodicies entail that every action and event that occurs necessarily occurs; whether one can mount an anti-utilitarian criticism of multiverse theodicies; and whether any particular universe can really add to the goodness of reality, given that the infinite amount of goodness in reality will be of a higher cardinality than the amount of goodness in any particular universe.

2. What is the Axiological Threshold?

According to proponents of multiverse theodicies, which universes would God create? One answer is that God would create all possible universes. This idea is discussed seriously by Derek Parfit: he considers the view that all possible universes exist, and that reality is the way it is because it would be best if reality were that way.[2] While Parfit isn't trying to give a theodicy, his view can be used as one—God wants the best, and so if the best reality includes all possible universes, then God would create all those universes.

The benefit of this answer to the question "which universes would God create?" is that it accounts for why our universe exists. The drawback of this answer is that it would mean that God would create horrendously evil universes, universes where the only constraint on what horrible things happen to the creatures in such universes is the constraint of logical consistency.

Elsewhere, Parfit sets aside the view that every universe exists, and instead proposes the view that "every good Universe exists."[3] Parfit doesn't specify what it takes for a universe to be good though. John McHarry provides a bit more detail: he says that God would create every universe "which is better than nothing."[4] Donald Turner suggests a similar view—that God would create every universe "with a favourable balance of good over evil."[5]

This strikes me as the most plausible choice for the axiological threshold, but there are various details that could be filled in, and minor emendations worth considering. I'll now discuss seven variants of the "favorable balance of good over evil" axiological threshold idea.

First, in addition to creating all the universes with more good than evil, God could create all the universes with just as much good as evil—all the universes which aren't worse than creating nothing. It's hard to see why this would be better than the McHarry/Turner view, but it's also hard to see why this would be worse.

The second variant applies if God is not capable of creating all the possible universes. For example, Plantinga's transworld depravity hypothesis might be true, so that God can't create universes where free creatures always do the right thing, even though such universes are logically possible.[6] On this variant, God would create every universe with a favorable balance of good over evil that he's capable of creating.

The third, fourth, and fifth variants apply if God is in time and does not know everything about how the future will go—for example, if open theism is true. It's not clear how exactly the doctrine of open theism would work, given the existence of multiple universes. Presumably, God would be in time in the various universes, in such a way that he wouldn't know everything about the future in each of the universes that he is in. If that is the correct characterization of the view, then when God creates a universe, he might not know whether that universe will end up being one with a favorable balance of good over evil. This would happen if, for example, whether the universe ends up having a favorable balance of good over evil depends on the choices of free creatures, where God doesn't know in advance what choices will be made.

This leads to the third variant of the "favorable balance of good over evil" axiological threshold idea. The third variant holds that God only creates those universes where, no matter what choices free creatures make, the universe is guaranteed to have a favorable balance of good over evil. The benefit of this variant is that God ends up not creating any universes that detract from the goodness of reality. The drawback of this variant is that God will be left not doing all that he probably can to add to the goodness of reality. For example, imagine that God is contemplating creating a universe where there are 1000 people that will each make exactly one morally significant free choice between Option A (which adds to the goodness of reality) and option B (which adds to the evilness of reality). There is enough other goodness in this universe such that, as long as at least one person chooses Option A, the universe will have a favorable balance of good over evil—but if all 1000 people choose option B, the universe won't. On the third variant, God can't create this universe, since it's not guaranteed to have a favorable balance of good over evil. But if God is willing to play dice with universes, then this universe is worth creating, because the odds are that it will add to the goodness of reality.

This then leads to the fourth variant of the "favorable balance of good over evil" axiological threshold idea. The fourth variant holds that God will only create those universes where, at the moment of creation, God's epistemic probability that the universe will turn out to be one where there is a favorable balance of good over evil is greater than 1/2. God will probably end up creating some universes that detract from the goodness of reality, but he can expect that the net result of creating the extra universes allowed by the fourth option that are not allowed by the third option is that there is more goodness in reality.

The fifth variant is a lot like the fourth, except it replaces "greater than" with "greater than or equal to": God will only create those universes where,

at the moment of creation, God's epistemic probability that the universe will turn out to be one where there is a favorable balance of good over evil is greater than or equal to 1/2. As with the first variant, it's hard to see why this is better—or worse.

There are an infinite number of other variants that can be generated, by replacing "1/2" with some other number between 1/2 and 1, depending on how much of a risk-taker God would want to be in his universe-creation. But instead of delving into that sort of speculation, let's set open theism aside, and go back to assuming that God knows what the balance of good over evil would be in any universe he is contemplating creating.

The sixth variant of the "favorable balance of good over evil" axiological threshold is due to Peter Forrest. Forrest holds that God created all the "on-balance-good" universes, with the restriction that no two universes are very similar to one another. Forrest calls this the "Not Too Similar constraint on creation." Unfortunately, the only justification he provides for this constraint is the following: "it is counterintuitive to suggest that God creates universes that are too similar to each other."[7] I do not share this intuition; I don't see why, once God created a universe, he would be constrained not to create a universe too similar to it. Forrest doesn't make clear whether this is a choice that God makes or a logical constraint on God's ability to create. If the latter, then the key arguments I'll give below don't go through (as you'll see when you get to them). But since I don't know of any plausible motivation for the view that the Not Too Similar constraint is a logical constraint on God, and since Forrest doesn't actually argue for that view, I'll set that view aside.

The seventh and final variant of the "favorable balance of good over evil" axiological threshold I'd like to mention is due to Timothy O'Connor. O'Connor argues that God creates an infinite hierarchy of universes, such that "every significant kind of goodness capable of creaturely realization would be instantiated somewhere in the created order," but O'Connor does not maintain that every possible good universe is created.[8] I'll discuss O'Connor's variant more in Section 9 of this paper.

Some proponents of multiverse theodicies hold that there is an axiological threshold, but refrain from providing specifics. I have in mind Klaas Kraay, who holds that God creates all universes "that have an axiological status that surpasses some objective threshold *t*," but does not say what that objective threshold is. Instead, he has a footnote, saying: "This threshold would be difficult to specify, but could presumably be expressed in the language of world good-making properties and world bad-making properties."[9] Kraay presumably rejects the "favorable balance of good over evil" axiological threshold, since that threshold is relatively easy to specify.

3. Plenitudinous Hyperspace

In this section, I will take up Hud Hudson's version of a multiverse theodicy.[10] Hudson holds that there is a "plenitudinous hyperspace": in addition to the three spatial dimensions that we're familiar with, there is a fourth

spatial dimension, and there exist other three-dimensional spatial systems at fixed distances from us along the fourth spatial dimension. Hudson says that his thesis "provides the resources to maintain a straightforward sense in which God creates absolutely every world worth creating, even if their number is indenumerable." Hudson explains that by "world" in this context, he means "independent three-dimensional subregion of hyperspace," and not "possible world" as it's standardly used.

There are two drawbacks of Hudson's theodicy that I'll point out here. First, if God's goal is to create every universe worth creating, he would be constrained by the restriction that these universes must correspond to three-dimensional subregions. Presumably, there are universes with a favorable balance of good over evil, universes that God would deem worthy of creating, that have more than three spatial dimensions. These universes could not correspond to three-dimensional subregions in Hudson's ontology.[11]

Second, Hudson points out that there are an indenumerable number of independent three-dimensional subregions, but what I want to emphasize is that the set of all these three-dimensional subregions just has the cardinality of the continuum (known as beth-one, or—if the continuum hypothesis is true—aleph-one).[12] But there are more than continuum-many universes that God would deem worthy of creation—and hence, Hudson's ontology doesn't provide the resources to contain every universe that God would want to create. Why are there more than continuum-many universes that God would deem worthy of creation? Imagine a universe with lots of good events, and not many bad events. Imagine that each spacetime point in this universe also has a magnitude that can take one of two possible values, and that magnitude is distributed over a continuum of spacetime points. There are more than continuum-many ways that this two-valued magnitude could be distributed—specifically, there are beth-two ways (the cardinality of the power set of the set of real numbers). Hence, there are more than continuum-many universes with a favorable balance of good over evil. Since Hudson's ontology can only include continuum-many independent three-dimensional subregions, Hudson's ontology leaves out almost all the universes that God would deem worth of creation.

Here's a more detailed explanation of my reasoning, for those who aren't following the math. There are different sizes of infinity—the size of the set of natural numbers (cardinality beth-zero) is smaller than the size of the set of the real numbers (cardinality beth-one), and the size of the set of the real numbers is smaller than the size of the power set of the set of the real numbers (cardinality beth-two). (The power set of a set *S* is the set of all the sets that can be formed with the members of *S*.) Let's think about the situation discussed above, where a two-valued magnitude is distributed over a continuum of spacetime points.[13] First, imagine putting the continuum-many spacetime points in a one-to-one correspondence with the set of real numbers. Now, imagine forming a particular set of real numbers by using the two values of the magnitude to represent "yes" and "no" answers to the question of whether the real number corresponding to that spacetime point is in the

set. (For example, if two possible values of the magnitude are 0 and 1, magnitude 0 at a spacetime point would represent that the real number corresponding to that spacetime point is not in the set, and magnitude 1 would represent that it is.) All the different distributions of the two-valued magnitude correspond to all the different sets that can be formed with the members of the set of real numbers. Hence, the set of universes corresponding to all the different distributions of this two-valued magnitude is the same size as the power set of the set of real numbers—beth-two. Hence, there are more than continuum-many good universes, but Hudson's theodicy can only accommodate continuum-many independent three-dimensional subregions.

So, we have two drawbacks for Hudson's theodicy: that it can't include independent subregions with more than three spatial dimensions, even though there are good possible universes with more than three spatial dimensions; and it can't include more than continuum-many independent subregions, even though there are more than continuum-many good possible universes. How problematic are these two drawbacks of Hudson's theodicy?

The first would be a significant drawback if there are certain types of goods that can't be achieved except in universes that have more than three spatial dimensions. Hudson could maintain that there are no such goods—except, that is, for the goods that are achieved by having the spatially four-dimensional plentitudinous hyperspace. The claim that there are no such goods strikes me as doubtful, but it's not clear how to argue against it. One way Hudson could potentially justify excluding universes with greater than three dimensions is that he could argue that there's a natural, non-arbitrary cutoff at three dimensions. Three dimensions, arguably, are the smallest number of dimensions it takes to have consciously existing embodied beings, and hence that is the smallest number of dimensions it takes to have that sort of significant moral value in the universe. Having a non-arbitrary cutoff is valuable to Hudson, since one of his motivations for postulating plenitudinous hyperspace is that it leads to "a reduction of bruteness and arbitrariness in the world."[14] (The reason plenitudinous hyperspace leads to a reduction of arbitrariness is: if one wonders why, for example, the speed of light has the value that it has, rather than some other value, Hudson's answer is: it does have that other value, in a different independent three-dimensional subregion.)

Let's take up the second drawback I've discussed above, that Hudson's plenitudinous hyperspace can't include all independent three-dimensional subregions corresponding to all the good three-dimensional possible universes that there are. One could argue that this is not a significant drawback: following O'Connor, one could hold that what counts is that every significant kind of goodness is realized; it doesn't matter that not all possible distributions of a two-valued magnitude over a continuum of spacetime points are realized. But the drawback here is that, as far as I can tell, there's no principled way of determining which distributions of the two-valued magnitude should be realized—any choice that God makes seems arbitrary. While this arbitrariness doesn't produce a refutation of Hudson's theodicy,

it does remove one of the motivations Hudson cites in favor of his theodicy.

More speculatively, I can imagine a scenario where the two-valued magnitude in question is an axiologically significant magnitude, so that the different distributions of the two-valued magnitude lead to different distributions of goodness in the three-dimensional subregion. We can specify that there is enough other goodness in the universe that each of these different distributions produces a universe that has a favorable balance of good over evil. If that scenario can arise, then Hudson's inability to have more than continuum-many independent three-dimensional subregions seems like even more of a problem—God would not be able to create most all the three-dimensional subregions that would be worth creating, even though the differences in these different possible three-dimensional subregions are axiologically significant differences.

The drawbacks I've identified for Hudson's theodicy don't apply to the standard versions of multiverse theodicies, according to which there are completely spatiotemporally independent universes. I'll focus on standard multiverse theodicies for the rest of this paper, though I will come back to one of Hudson's arguments for a multiverse theodicy in the final section.

4. Objection #1 That I'm Setting Aside—Modality

A number of objections to multiverse theodicies have been given in the literature. In this section, I will discuss the first of three sorts of objections that I'm ultimately setting aside.

First, I'll take up objections to multiverse theodicies based on modal concerns. Specifically, on some ways of motivating multiverse theodicies, God by his omnibenevolent nature is obligated to create exactly the universes that he does create. This, arguably, means that every action and event that occurs necessarily occurs. As Michael Almeida puts it, the consequence of (some) multiverse theodicies is that "the actual complex world is the exclusive possible world. Everything that's possible is actual." Almeida says that this has bizarre fatalistic consequences: "there is obviously no free will and no moral responsibility . . . there is no agency, no basis for self-respect, or moral praise or blame."[15] (It's worth noting that, arguably, this issue doesn't arise just for multiverse theodicies—it also comes up for those who hold, like Leibniz, that God created just one universe, and that one universe he created is the one possible universe that is unsurpassably good.)

As I see it, there are four ways of responding to Almeida's criticism. The first is to endorse the version of a multiverse theodicy that Almeida endorses, "theistic modal realism." On this view, like with David Lewis's modal realism, modality itself is analyzed in terms of the universes in existence—*P* is possible iff *P* holds in some universe, and *P* is necessary iff *P* holds in every universe. (In place of "universe," Lewis has "world," but that's just a terminological difference.) In my opinion, theistic modal realism faces the same key drawback that Lewis's modal realism does—it seems possible that the collection of universes in existence could have been differ-

ent than it actually is, yet one can't make sense of this possibility given the reductive analysis of modality Lewis and Almeida endorse.

The second way of responding to Almeida's criticism is to hold that God did not of necessity create all the universes worth creating—he chose to do so, but he was not obligated of necessity to do so. For example, Donald Turner writes: "God is perfect, lacking nothing, and so God plus the universe is no better than God alone. . . . But God is a loving God, and while he does not *need* anyone to show his love to, nevertheless his love leads him to create beings to show his love to."[16] This makes it sound like God was not obligated to create universes, but he did so out of his free choice. (The typical theistic view of love is that it requires free will—a loving relationship can't be coerced, or entered into by an automaton—and so if God is showing his love to beings like us, he's doing so freely, not out of necessity.)

The third way of responding to Almeida's criticism is to hold that God was obligated by his nature to create every universe worth creating, but all (or at least, some) of those universes include creatures with libertarian free will, and that's part of what makes them worth creating. Thus, since there is free will, there could be moral responsibility, agency, and a basis for self-respect in those universes—and this can hold even though these universes were created of necessity.

Finally, the fourth response is to just bite the bullet, and hold that indeed everything that happens happens of necessity. Almeida calls this view "wildly implausible," but this wouldn't be the first time that one philosopher has rendered this judgement on a view that another philosopher endorses.

5. Objection #2 That I'm Setting Aside—Utilitarianism and the Eschaton

A different criticism of multiverse theodicies is given by Paul Draper. Draper writes:

> a morally perfect God must be a benefactor to all his sentient creatures and so must consider, in creating a universe, not (primarily) the overall value of that universe, but rather the value for each sentient being of that being's life. She cannot justify creating bad lives on the grounds that the universe as a whole is good, even if those bad lives make possible other good lives. [I've changed "world" to "universe" to match my terminology.][17]

Thus, Draper concludes that God would not create a universe that adds to the goodness of reality if that universe had bad lives in it. Draper goes on to consider the idea that the creatures who have bad lives on earth can have overall good lives as a result of having a good life in the eschaton. He suggests, though, that "God would have a prima facie moral obligation" to immediately remove creatures from earth, to prevent them from having a bad earthly life, and God would have this obligation "even if that would lower the overall value of God's creation taken as a whole."

The core of Draper's criticism can be summarized as "God is not a utilitarian."[18] But the multiverse theodicies solution, while not entailing utili-

tarianism, clearly has a utilitarian-related motivation. The whole point of providing a theodicy is to provide an account of why there is seemingly pointless suffering in our universe. The answer the multiverse theodicies proponent is giving is that the creatures that seemingly pointlessly suffer are part of a universe that's worth creating. Draper says that God cannot justify creating these bad lives "on the grounds that the universe as a whole is good," but he doesn't argue for that, and that's exactly the point where multiverse theodicies are biting the bullet. Any theodicy is going to have something prima facie surprising to say about the existence of evil—there wouldn't be a deep philosophical problem of evil if there were a solution that is completely intuitive.

What about Draper's raising of the afterlife issue? Proponents of multiverse theodicies need not even endorse an eschaton; they can simply argue that creating bad lives is worth it for God, because it enables him to create a universe which adds to the goodness of reality. But if there is a heaven, then with regard to the question "why doesn't God immediately put us there?," different multiverse theodicists could give different plausible answers. For example, some might say that God did create good universes where God does immediately put all people in heaven; we just don't happen to live in one of them. Others might say that universes where all people just exist in heaven aren't worth creating, because then creatures aren't making the free choice to love and be with God, and so there's no moral goodness to those universes. Yet others might say that incarnation and atonement are so morally valuable that every universe that God creates will have those events, and those events can't take place if every person just exists in heaven.[19] There are other options too, of course, but my main point here is that multiverse theodicists don't even need to appeal to heaven to argue for their theodicy.[20]

6. Objection #3 That I'm Setting Aside—Infinite Utility

Here's the final criticism of multiverse theodicies that I'm ultimately setting aside. Above I've talked about universes with a favorable balance of good over evil "adding to the goodness of reality," but one could object that in fact they don't do that. Even assuming that universes can be bearers of value, and that the value can be quantitatively measured, and that the value of universes are commensurable, one could still object that the goodness of reality isn't increased by adding a good universe. The rationale would be that the sum total of goodness of the multiverse world is some infinite cardinality, and a single universe just has a finite cardinality, or an infinite cardinality which is smaller than or equal to the cardinality of the multiverse world, and hence adding a single universe won't increase the cardinality of goodness of the multiverse world. For example, if the cardinality of goodness of the world is beth-two, then adding a single universe with cardinality of goodness 17, or cardinality of goodness beth-one, or even cardinality of goodness beth-two, isn't going to change the cardinality of goodness of the multiverse world—it will still be beth-two.

One response to this—the wrong response—is to say that the math does correctly capture how values of universes should get aggregated, and hence there is no need for God to create any particular universe; God just needs to create enough universes to get the goodness of the world up to the cardinality that the world would have if God created all the universes worth creating. This is the result one would get if one followed the principle of maximizing utility—one ends up being indifferent between any scenarios that generate the same net utility. A small drawback of this response is that it can't account for why God created our universe, since our universe—like any single universe—isn't needed to get the requisite amount of goodness. But one can just appeal to God's free choice—and a benefit of doing so is that it enables one to set aside Almeida's necessitarian concerns that I discussed above. But the bigger drawback of this response is that there's no reason why God wouldn't create universes with an *un*favorable balance of good over evil—as long as the cardinality of badness of these universes is less than the cardinality of goodness in the world as a whole, then adding these universes to the world won't change the cardinality of goodness in the world. Just as God has no reason to create any particular good universe, on this view, God has no reason not to create any particular bad universe.

A better response is to hold that God would not create any bad universes, and would create all the good universes, even though these individual universes don't change the cardinality of goodness of reality. The reason that God creates all good universes is simply that they are worth creating. But what sort of principle can we appeal to to generate this result, given that the principle of maximizing utility does not yield it? Almeida suggests that the multiverse theodicist can endorse the reasoning of Vallentyne and Kagan, who endorse a principle that enables one to sometimes say that one world is better than another, even when both worlds have the same infinite cardinality of utility.[21] Here is the basic formulation of their principle:

> If [worlds] w1 and w2 have exactly the same locations, and if, relative to any finite set of locations, w1 is better than w2, then w1 is better than w2.[22]

But Almeida is mistaken to hold that the Vallentyne/Kagan principle is applicable in the multiverse theodicy situation. The reason is that, in the multiverse theodicy situation, the worlds being compared don't have exactly the same locations. What is it for two worlds to have the same locations? In our context, the locations are universes (though in other contexts, they could be times, people, or spatial locations). In our context, two worlds have all the same locations if they share all the same universes. But the scenarios that we are talking about are manifestly not all like that. For example, we've considered God adding another universe to the world: this is a scenario where one world contains a location that the other world doesn't.

Vallentyne and Kagan don't give a principle that applies when comparing worlds that do not have exactly the same locations, and as far as I can tell, nowhere in the literature on infinite utilities does anyone do so. Here is my attempt at formulating a principle that will deal with some of these cases:

> If world w1 has all the locations that world w2 has, but w1 has more locations as well, and if the values of all the shared locations are the same, and the values of the non-shared locations in w1 sum to a positive number, then w1 is better than w2.

I think that this principle is correct, and it has the benefit of yielding the right result in some cases. For example, if w1 contains exactly one universe that w2 does not contain, but otherwise they are the same, then God will judge w1 to be better than w2 as long as that one extra universe has positive utility. Ultimately, though, the principle is not strong enough for the purposes of the multiverse theodicist. The problem, as before, is that the locations in w1 that aren't shared with w2 could contain some extremely bad universes, as long as they are compensated for by enough good universes. In such a scenario, it would be correct to say that w1 is better than w2, but we would not expect God to actualize w1.

The most promising response to this criticism is to give up on aggregating values of universes altogether, and just decide for each individual possible universe whether God would want to create it. This is the response given by Donald Turner. He writes:

> Rather than trying to look at the numerical value of God's creation, we must look at each possible universe individually. God will create a universe corresponding to that possibility if it is better that it exist than not.[23]
>
> [I've changed his terminology to match mine; the original passage is: "Rather than trying to look at the numerical value of God's creation, we must look at each simple possible world individually. God will create a cosmos corresponding to that simple possible world if it is better that it exist than not."]

This is, in my opinion, the most promising approach for multiverse theodicists to take: they should hold that God evaluates each possible universe individually, to determine how worthy it is of creation. It would be nice though, to have a general aggregative principle for comparing values of worlds that yielded this result.

7. The Duplication Objection

In this section, I'll show that multiverse theodicies don't solve the problem of no best world—I'll argue that, for any world God actualizes, he could have actualized a better one. Suppose that God has created all the universes above some threshold of goodness, and consider the claim that the resulting world is the best possible world. A problem arises once one considers the possibility that God could create *duplicates* of universes. Just as God can add to the goodness of reality by creating a qualitatively new universe that's above the threshold of goodness, so God can add to the goodness of reality by creating a universe above the threshold that's a duplicate of one he's already created.

But the defender of the multiverse solution to the problem of no best world then faces a problem. How many duplicates of each universe should God create? No matter how many duplicates he does create, he could have

created more. Moreover, note that there is no upper limit to the cardinality of the number of universes God creates. If there are n good universes, God could create 2^n duplicates, which results in a world with a greater cardinality of universes, and hence a greater cardinality of goodness. Or, God could create 2 to the 2^n duplicates, which results in a world with yet greater cardinality of goodness, and so on. I conclude that, for any multiple-universe world God actualizes, he could have actualized a better one, and hence the appeal to multiple universes does not solve the problem of no best world.

Some proponents of multiverse theodicies at least nascently recognize this potential problem, and they have a way around it: they endorse the principle of identity of indiscernibles (PII). This enables them to say that God couldn't create duplicates of universes, because if universes A and B are qualitatively indiscernible, then they are actually numerically identical. As I'll now explain, there are three problems with this argumentative move. First, those who endorse the PII in this context don't defend the principle, so there is at least a lacuna in their argument. Second, the PII is in fact false. And third, even if the PII were true, I can still argue that God could create near-duplicates, and for any number he creates, he could have created more.

McHarry does the best job flagging the PII as an explicit assumption needed for his multiverse theodicy to be successful. He writes:

> Now there can be more than one universe, but we have as yet no reason to suppose that God could not just create as many copies as He would of the best of all possible universes. . . . We need, therefore, to assume a strong version of Leibniz's law of the identity of indiscernibles: there cannot be two distinct entities which do not differ in respect to at least one property. Given this, there cannot be . . . multiple copies of the best of all possible universes. Each universe must differ from all others in some way, however trivial. [I've changed "world" to "universe" to match my terminology.][24]

While McHarry doesn't go on to argue for the PII, he does at least make clear that he's *assuming* that it's true. Other multiverse theodicists, in contrast, write as if it is unproblematically true. For example, Turner talks of the possibility of God creating multiple indiscernible universes, but writes "by the Principle of Identity of Indiscernibles, these multiple cosmoi are identical."[25] And Kraay writes:

> If a possible world comprises more than one universe, these universes may differ in many respects (e.g., different histories, different laws of nature), but they must be logically compossible: by definition, there can be no logical contradiction between different universes within one possible world. One consequence is that there can be no exact copies of universes within a multiverse.[26]

Prima facie, that sounds like a non sequitur—why would having exact copies lead to a logical contradiction? Kraay explains his reasoning with a footnote: "Given the Identity of Indiscernibles, at any rate, this is impossible. (See McHarry 1978, p. 133.)" Kraay cites McHarry, but McHarry, as we've seen, does no more than assume that the PII is true.

So, there is a lacuna in the argument that multiverse theodicies solve

the problem of no best world—proponents assume that the PII is true, but don't argue for it. This would not be a problem if, in fact, there were good arguments in the literature for the PII, arguments that the proponents just neglected to cite. But there are no such good arguments, because the PII is false.

Why is the PII false? Well, this would be a whole different paper. But here's a quick intuition-pump: multiverse theodicists (at least, multiverse theodicists other than Forrest) grant that God can create two universes which are very similar to one another—for example, the only difference could be that the distance between two particular particles in Universe #1 is slightly different than the difference between the counterparts of those two particles in Universe #2. One who endorses the PII would have to say that it's possible for God to create these two universes, as long as the distances are slightly different, but it would not be possible for God to create these two universes if the distances are the same. This restriction on God's ability to create is unintuitive.

Here's another way to argue against the PII. Stephen French and Michael Redhead show that, if quantum mechanics is logically possible, then the PII isn't necessarily true, and if quantum mechanics is true, then the PII is false.[27] Specifically, what they show is that, in quantum mechanics, two different particles can have the same monadic properties, and the same relational properties between them. As long as the PII isn't necessarily true, then if it is true, it would be true as a result of God's choice, and hence wouldn't constrain God's ability to create duplicate universes, if he so chose.

I won't go into these anti-PII arguments in more detail, because in fact a version of my duplication objection can go through even if the PII is true. One rather trivial way in which the PII could be true is if universes have haecceities. Nothing could be a non-identical duplicate of any universe U, because nothing other than U could share *all* the same properties as U—if a universe has the haecceitistic property of being U, then it would simply be U. So, if universes have haecceities, then God can create a near-duplicate of a universe, such that the near-duplicate differs from the original only in its haecceity. Since God could create arbitrarily many near-duplicates like this, the problem of no best world remains.

What about those who endorse the PII, and reject haecceities? Again, a version of my duplication objection can nevertheless be successful. Consider a perfect universe, and imagine that God decides to create a near-duplicate of that universe. The new universe is a perfect duplicate of the original universe, except that God mentally assigns a different name to the new universe: "Universe #2." The PII can be true in this scenario, because the new universe has a different property than the original, since it has the property that God mentally assigned the name "Universe #2" when God created it, while the original universe (let's say) has the property that God mentally assigned the name "Universe #1" when God created it. God can keep creating duplicates in this way, running through all the ordinal numbers: "Universe #3," "Universe #4," . . . , "Universe #ω," "Universe #ω+1," and so on. And God need not be finished, even if he exhausts the ordinal num-

bers. He can simply assign a new name to a universe, a name that hasn't been given before: "Universe Fred," for example. We can be sure that a name that hasn't been given before is available to God, because he can simply name the new universe in counterpoint to all the universes he's already created: "The Universe which is not Universe #1, Universe #2, . . . , or Universe Fred," for example. (This will involve God assigning infinitely long names to universes, but presumably this isn't a problem for an omnipotent being.) Thus, God can keep creating near-duplicates of universes—no matter how many universes there are, he can create more. I conclude that multiverse theodicies do not solve the problem of no best world.

8. Reply #1 to the Duplication Objection—Proper Classes

There are two potential replies one could give to my argument which I'll now consider. First, one could admit that adding some duplicates of good universes does add to the goodness of reality, but one could argue that past a certain point, it doesn't. Specifically, one could argue that once there is a proper class of duplicates of a good universe, adding more does not add to the goodness of reality. (One could instead frame the reply in terms of "near-duplicates," but I'll stick with "duplicates" for simplicity.)

What this reply is getting at is that, if God were to keep creating duplicates of universes in the way I suggested above, God would end up creating a class of universes that is, intuitively, larger than any set. (One can see this by thinking of the universes as being named by the ordinals, as I did above, and noting that that the class of all ordinals is not a set.) This class of universes would, intuitively, be too large to be measured by a cardinality of goodness. The proponent of this reply could then argue that adding more duplicates adds to the goodness of reality if they help to create a larger set of universes, with a larger cardinality of goodness, but if adding more duplicates does not help to create a larger set of universes with a larger cardinality of goodness, then the duplicates are not adding to the goodness of reality. Once there are a proper class of duplicates of a good universe, then adding more will not help to add to the goodness of reality—the goodness of reality is, intuitively, larger than any cardinal number.

We can see the problem with this reply by noting that it was already decided in Section 6 that the goodness of God's creation can't simply be measured by a cardinal number. Some worlds are better than others, even if these worlds all have the same cardinality of goodness. There I endorsed Turner's line of thought: "Rather than trying to look at the numerical value of God's creation, we must look at each possible universe individually. God will create a universe corresponding to that possibility if it is better that it exists than not." By that line of reasoning, even if there exists a proper class of duplicates of a good universe, God will consider a new possible duplicate of that universe, and will create it if it is better that it exists than not. Thus, no matter how many duplicate universes God does create, he can add to the goodness of reality by creating another one.

I recognize that not everyone will agree with my counter-reply to this reply to the duplication objection, but such is philosophy. And there are other potential ways to get around the reply in question. Until recently, the position I endorsed was that, no matter how many duplicates God created, there would always be a set of duplicates—one could never leave the set-theoretic hierarchy simply by creating more and more duplicates. My reasoning was presented well by David Lewis, in his discussion of how many possible worlds exist in his modal realist framework:

> How could the worlds possibly fail to comprise a set? We do say that according to the iterative conception of sets, some classes are 'too big to be sets', but this is loose talk. Sheer size is not what matters; rather, the obstacle to sethood is that the members of the class are not yet all present at any rank of the iterative hierarchy. But all the individuals, no matter how many there may be, get in already on the ground floor. So, after all, we have no notion what could stop any class of individuals—in particular, the class of all worlds—from comprising a set.[28]

But I now think that Lewis's reasoning, at least as applied to the case of duplicating universes I discussed above, is mistaken. The reason is that God can create enough duplicates that they can be in a one-to-one correspondence with the ordinals, and the class of ordinals is not a set. But perhaps I am wrong, and Lewis's reasoning does apply; that would provide a different way to handle the "proper classes" reply to my duplication objection.

9. Reply #2 to the Duplication Objection—Types of Goodness

Here's the second reply one could give to my duplication objection. One could argue that, contrary to what I've asserted, adding any duplicates of good universes actually does not add to the goodness of reality. Suppose the world contains a single universe, and that universe has a certain amount of goodness associated with it. One could maintain that, no matter how many duplicates of that universe are created, the total goodness of the world is unchanged. The rationale would be that, once the appropriate *type* of goodness is instantiated in reality, then adding more instances of that type does not change the quantity of goodness in reality. Goodness, in short, is measured by types, not tokens. This objection is related to the version of multiverse theodicies that O'Connor briefly takes up, the seventh variant discussed in Section 2 above. O'Connor holds that God creates an infinite hierarchy of universes, such that "every significant kind of goodness capable of creaturely realization would be instantiated somewhere in the created order," but O'Connor does not maintain that every possible good universe is created.[29] Indeed, to defend his view, O'Connor rhetorically asks: "Why should a master artisan, even one of maximal goodness and without limitations, pursue mere duplication, much less unlimited duplication, of similar objects and systems?"[30]

My counter-reply starts by pointing out that the thesis that goodness is measured by types, not tokens, is at best counterintuitive. Think about an

application of that principle on a more prosaic level, in a community of humans. Imagine that John and Jane have a happy marriage, and as a result a philosopher in the community advises everyone else that there's no benefit in them having happy marriages, since John and Jane have already instantiated that kind of goodness. This advice would not be taken seriously. Now, O'Connor's rhetorical question focuses on duplication, and in the communities we're familiar with, everyone's marriage is happy in its own unique way. Would it matter if the community were such that everyone's marriage were happy in exactly the same way? It is still completely reasonable for Sam and Sarah to desire a happy marriage, even though John and Jane already have one—and it adds to the goodness of reality if Sam and Sarah's marriage is, indeed, happy.

With regard to the issue of duplication, O'Connor doesn't say any more about it than his rhetorical question quoted above, so I don't have a detailed argument to which I can reply. Instead I'll just offer the suggestion that there is value in creating duplicates. It's easiest to see this from the perspective of a person who has a duplicate. Imagine that you found out that there are duplicate versions of you existing in other universes. (As for free will, you could imagine that, no matter what choices you make, there are duplicates who make those same choices.) Assuming that you didn't feel worthless as a person before you found out that you have duplicates, would discovering that you have duplicates in other universes make you feel worthless? My intuition is that I would feel surprised for a while, but it wouldn't ultimately make my life feel any less valuable. If I thought that my life added to the goodness of reality before I found out about the duplicates, I would still feel that way afterwards.

O'Connor uses the phrase "mere duplication," but I think that (in the context where I'm interpreting him as talking about the sort of duplication of universes that I'm talking about) that's misleading. God isn't just pursuing duplication, on the multiverse theodicy picture. God creates instances of every significant kind of goodness, as O'Connor suggests, but God recognizes that he can add to the goodness of reality by creating more. This isn't a pursuit of mere duplication; this is a pursuit of goodness, which has duplication as a byproduct.

10. The Problem of Evil

To sum up the above discussion: creating duplicates (or near-duplicates) of good universes adds to the goodness of reality, so God would create duplicates. But no matter how many duplicates God creates he could have created more. Hence, there is not a best world that God can actualize—no matter what he does, he could have done more to add to the goodness of reality.

The duplication objection might seem like a rather abstruse objection, focusing as it does on infinite cardinalities and proper classes of universes. Moreover, the duplication objection was raised in response to the claim that multiverse theodicies don't solve the problem of no best world, but perhaps

the problem of no best world isn't really an objection to the existence of an omnipotent, omnibenevolent being at all. Perhaps, following for example Daniel and Francis Howard-Snyder, the fact that there is no best world means that we can't impugn God's omnibenevolence for failing to actualize the best world, as long as he actualizes a good one.[31] (After all, we can't hold God morally responsible for failing to do something that it's logically impossible for him to do.)

But as we'll see, the issue raised in the duplication objection is important, regardless of whether the problem of no best world is really a problem. Specifically, the fact that God can keep adding to the goodness of reality by creating duplicates will be a key premise in my argument which shows that multiverse theodicies do not solve the problem of evil.

Before I present that argument, let me impose one constraint on the discussion. What the problem of evil focuses on is the existence of seemingly pointless evils. We can agree that it's permissible for God to allow evil if the evil is needed for there to exist an overriding good—such evils aren't pointless. One response to the problem of evil is to argue that seemingly pointless suffering has a this-universe explanation—for example, that the suffering allows soul-making, or that it allows people to recognize the horror of being separated from God. But anyone who can solve the problem of evil by arguing that seemingly pointless suffering has a this-universe explanation doesn't need to appeal to multiverse theodicies. Thus, the constraint on the discussion is that we'll assume that one can't solve the problem of evil by showing that the seemingly pointless suffering we encounter in this universe has a this-universe explanation.

Now, let's turn to my argument. Given all the set-up, it will be brief. Imagine that, in the collection of universes God creates, there is a universe *U*. This universe has a favorable balance of good over evil, but it contains a sentient creature who seemingly pointlessly suffers. Specifically, there is no reason, based on just what happens in *U*, for that creature to suffer—there is no countervailing good that comes of it, for example. Imagine that there is also, in the collection of universes God creates, a universe I'll call *Nice-U*, which is qualitatively identical to *U*, except that the counterpart of the pointlessly suffering creature does not undergo the pointless suffering. (For example, the creature might become a zombie for the time period its counterpart pointlessly suffers, or the creature might simply cease to exist for that time period.) What is the virtue of creating *U* in addition to *Nice-U*? Instead of creating *U*, why didn't God just create a duplicate (or near-duplicate) of *Nice-U*? I maintain that there is no reason for God to create a universe where creatures pointlessly suffer; he is better off creating duplicates of nice versions of those universes instead, where no pointless suffering happens.

Why can't the proponent of multiverse theodicies simply grant my point, and say that God didn't create *U*, God just created universes without pointless suffering like *Nice-U*, and duplicates of such universes? The reason is that *our universe* is like *U*—our universe is one with creatures that seemingly pointlessly suffer, where there is no this-universe-based justifica-

tion for why God would allow them to suffer. Or at least, that's what I believe, and that follows from the constraint I placed above on the discussion. Thus, proponents of multiverse theodicies must admit that God creates universes like *U*, and yet they have no good account of why God would create such universes.

Consider a proponent of multiverse theodicies who holds that *Nice-U* already exists as part of the multiverse, and argues if *U* did not exist as well, then the world would be less good than it could have been. Their thought is that since *U* is above the threshold of goodness, then *U* is worth creating; *U* adds to the goodness of reality. Almeida makes this sort of point (in the context of discussing Turner's version of a multiverse theodicy): Almeida says that God's failing to create *U* would "entail that the total amount of actual value is less than the greatest possible amount of value."[32] But this reasoning is mistaken. If the world including *U* is the best world God could actualize, then indeed it's the case that leaving *U* out would produce a less good world. But Almeida is not adequately taking into account the possibility of creating duplicates of universes. Instead of creating *U*, God could simply create a duplicate of *Nice-U*. It's true that that God could add to the goodness of reality by creating *U* as well, but God could add to the goodness of reality even more by creating a duplicate of *Nice-U*. God would never feel compelled to create *U*, since he could instead create another duplicate of *Nice-U*, and since no matter what universes God creates, God will never be able to achieve the greatest possible amount of value.

I conclude that, even in the context where one is allowing for the possibility of God to create multiple universes, to the extent that we have evidence that our universe does have pointless suffering, we have evidence against the existence of God.

11. Inter-Universe Considerations

So far, I've presented multiverse theodicies in such a way that, when God decides whether to create a particular universe, he evaluates that possible universe on an individual level. Whether God decides to create the universe will depend on the intrinsic properties of that universe alone (such as whether it has a favorable balance of good over evil). But some multiverse theodicists think that this is an impoverished approach.[33] There are two main sorts of inter-universe considerations given. The first is that that the collection of universes can be judged on aesthetic grounds. The idea here is that the seemingly pointless suffering can be seen to have a point because the universe with the suffering fits into a larger system with valuable aesthetic properties. The second sort of inter-universe consideration given is that the collection of universes can be judged on how much it avoids bruteness and arbitrariness. The idea here is that, for a world that contains just one universe, it seems arbitrary which universe is created, but for a world that contains all universes that meet some natural criterion, the considerations that go into determining which universes are created are not arbitrary.

Parfit provides the earliest example I know of where inter-universe considerations are appealed to:

> The Louvre would be a worse collection if its less good paintings were turned into copies of the 'Mona Lisa'. In the same way, if our universe were in itself better, reality as a whole might be less good. Since every other good niche is already filled, our universe would then be a mere copy of some other universe, and one good niche would be left unfilled. [I've changed "world" to "universe" to match my terminology.][34]

The analogy with the Louvre is clearly an aesthetic analogy, and the talk of niches being left unfilled sounds like the suggestion that it would be arbitrary not to fill every good niche. I'll first discuss the aesthetic move, and then move on to considerations of bruteness and arbitrariness.

It's one thing to make Parfit's aesthetic judgement about paintings, but I maintain that the analogy does not carry over to the moral situation where creatures are pointlessly suffering (specifically, where the suffering is pointless when evaluated using intra-universe considerations). Imagine that reality includes a single instance of each universe above the threshold of goodness, other than the previously discussed good universe with a pointlessly suffering creature, universe *U*. Imagine that God is now trying to decide whether to create *U*, or to create a duplicate of *Nice-U*, the universe like *U* but without the pointless suffering. It's true that, if God does not create *U*, a good niche will be left unfilled. But if the choice is between creating *U* and creating a duplicate of *Nice-U*, what is the virtue of creating *U*? The only thing *U* adds to reality that the duplicate of *Nice-U* does not is the event of a creature pointlessly suffering. But an omnibenevolent being like God should not see any value in that event, aesthetic or otherwise. Or, even if there is aesthetic value in that event, an omnibenevolent being should recognize that the value of avoiding pointless suffering completely swamps the aesthetic value. Hence, if faced with the choice of whether or not to create a universe with the event of the creature pointlessly suffering, God should refrain from doing so.

Hud Hudson explicitly appeals to aesthetic properties to argue that God is justified in creating universes with suffering that seems pointless when evaluated using intra-universe considerations.[35] Recall that in Hudson's theodicy, there is a plentitudinous hyperspace, where what I have been calling "universes" are independent three-dimensional spaces occupying different regions of the hyperspace. Hudson suggests that a creature who seems to be pointlessly suffering may actually be part of a larger system which has valuable aesthetic properties, such that if God did not create the seemingly pointlessly suffering creature, then the valuable aesthetic properties would not obtain. My reply is simply to insist that an omnibenevolent being would not value aesthetic properties over preventing an innocent creature from pointlessly suffering. Hudson himself predicts that his proposal "will seem appalling," and admits that we do not have any good reason to believe it.[36]

Let's turn to the second sort of inter-universe consideration, that the

collection of universes can be judged on how much it avoids bruteness and arbitrariness. Parfit was arguably getting at this idea with his suggestion that it would be a drawback of reality if a good niche were left unfilled. Also, Hudson appeals to bruteness and arbitrariness considerations explicitly: he says that they do not provide conclusive reasons to believe in plentitudinous hyperspace, but they simply provide "a somewhat attractive incentive to take seriously the hypothesis."[37] For purposes of this discussion, let's grant that, when one evaluates various possible collections of universes, the collections with less bruteness and arbitrariness are more valuable. The problem is that this can't be used to account for why God would create universes with pointless suffering (specifically, suffering that is pointless when evaluated using intra-universe considerations). The reason is that the considerations God would use to avoid creating universes with pointless suffering are not brute or arbitrary considerations—the goal of avoiding pointless suffering it not a brute or arbitrary goal.

To see my point, let's consider an analogous objection one might give to the hypothesis that God created every universe with a favorable balance of good over evil. One might object that God left all sorts of niches unfilled, because he didn't create every possible universe; instead he just created the universes that met this arbitrary criterion, that the universe has to have a favorable balance of good over evil. The problem with this objection is that the criterion isn't arbitrary at all; God has good reason for not filling certain niches. The same point can be made in response to Parfit and Hudson. God should not create universes with pointless suffering, and that's not a brute or arbitrary choice that God is making; he has good reason to not fill that niche. Or at least, he would have good reason, were he to exist. The fact that that niche is filled is evidence that he doesn't.

Acknowledgements

For helpful comments, thanks to Michael Almeida, Paul Draper, Michaela McSweeney, Sam Ruhmkorff, and Donald Turner. Thanks also to audiences at University of Colorado at Boulder, the Society of Christian Philosophers meeting in Durango, Colorado, Boise State University, and Calvin College. Thanks especially to Brian Kierland for extensive discussion and comments.

Notes

1. For defenses of multiverse theodicies, see for example John D. McHarry, "A Theodicy," *Analysis* 38 (1978): 132–134; Peter Forrest, "The Problem of Evil: Two Neglected Defences," *Sophia* 20 (1981): 49–54; Donald Turner, "The Many-Universes Solution to the Problem of Evil," in *The Existence of God*, ed. Richard Gale and Alexander Pruss (Aldershot, UK: Ashgate, 2003), 143–159; Michael Almeida, *The Metaphysics of Perfect Beings* (New York: Routledge, 2008), chap. 8; and Klaas Kraay, "Theism, Possible Worlds, and the Multiverse," *Philosophical Studies* 147 (2010): 355–368. For a close variant, see Hud Hudson, *The Metaphysics of Hyperspace* (Oxford: Oxford University Press, 2005), chap. 7.

2. Derek Parfit, "The Puzzle of Reality: Why Does The Universe Exist?" *Times*

Literary Supplement (3 July 1992), p. 3.

3. Derek Parfit, "Why Does the Universe Exist?" *Harvard Review of Philosophy* (Spring 1991), pp. 4–5; and Parfit, "The Puzzle of Reality," p. 5.

4. McHarry, "A Theodicy," p. 134.

5. Turner, "The Many-Universes Solution to the Problem of Evil," p. 149.

6. Alvin Plantinga, *God and Other Minds* (Ithaca, N.Y.: Cornell University Press, 1990).

7. Peter Forrest, *God Without the Supernatural* (Ithaca, N.Y.: Cornell University Press, 1996), p. 217.

8. Timothy O'Connor, *Theism and Ultimate Explanation* (Malden, MA: Blackwell, 2008), p. 123.

9. Kraay, "Theism, Possible Worlds, and the Multiverse," p. 361.

10. Hudson, *The Metaphysics of Hyperspace*, pp. 166–167.

11. A related point is made by Michael Rea, "Hyperspace and The Best World Problem: A Reply To Hud Hudson," *Philosophy and Phenomenological Research* 76 (2008), p. 449.

12. The continuum hypothesis holds that there are no cardinalities between the cardinality of the natural numbers (aleph-zero) and the cardinality of the continuum.

13. Such a situation is discussed in David Lewis, *On the Plurality of Worlds* (Malden, MA: Blackwell, 1986), p. 118.

14. Hudson, *The Metaphysics of Hyperspace*, p. 168.

15. Almeida, *The Metaphysics of Perfect Beings*, p. 153.

16. Turner, "The Many-Universes Solution to the Problem of Evil," p. 149.

17. Paul Draper, "Cosmic Fine-Tuning and Terrestrial Suffering: Parallel Problems for Naturalism and Theism," *American Philosophical Quarterly* 41 (2004): 319–320.

18. And Draper isn't the first to raise this sort of criticism; see also Forrest, *God Without the Supernatural*, p. 223.

19. For thoughts along these lines, see for example Alvin Plantinga, "Supralapsarianism, or 'O Felix Culpa'," in *Christian Faith and the Problem of Evil*, ed. Peter van Inwagen (Grand Rapids, Mich.: Eerdmans, 2004), pp. 1–25.

20. Though, Draper is perhaps right to suggest that an appeal to heaven could help some multiverse theodicists, because (depending on who goes to heaven) it could be the case that no one has an overall bad life. This would placate those who say that God wouldn't create overall bad lives, even if such lives are parts of an overall good universe.

21. Almeida, *The Metaphysics of Perfect Beings*, p. 157.

22. Peter Vallentyne and Shelly Kagan, "Infinite Utility and Finitely Additive Value Theory," *Journal of Philosophy* 94 (1997), p. 9.

23. Turner, "The Many-Universes Solution to the Problem of Evil," p. 151.

24. McHarry, "A Theodicy," p. 133.

25. Turner, "The Many-Universes Solution to the Problem of Evil," p. 150.

26. Kraay, "Theism, Possible Worlds, and the Multiverse," p. 360.

27. Stephen French and Michael Redhead, "Quantum Physics and the Identity of Indiscernibles," *British Journal for the Philosophy of Science* 39 (1988): 233–246; Stephen French, "Why the Principle of the Identity of Indiscernibles is Not Contingently True Either," *Synthese* 78 (1989): 141–166.

28. Lewis, *On the Plurality of Worlds*, p. 104.

29. O'Connor, *Theism and Ultimate Explanation*, p. 123.

30. *Ibid.*, p. 119.

31. Daniel Howard-Snyder and Francis Howard-Snyder, "How an Unsurpassable Being can Create a Surpassable World," *Faith and Philosophy* 11 (1994): 260–268.

32. Almeida, *The Metaphysics of Perfect Beings*, p. 151.

33. And I, also, think that it is an impoverished approach—the criticism I've given just above holds that God would not create a particular universe with point-

less suffering, precisely because God recognizes that there are better universes he could create without the pointless suffering.

34. Parfit, "The Puzzle of Reality," p. 4.
35. Hudson, *The Metaphysics of Hyperspace*, pp. 178–181.
36. *Ibid.*, p. 179, 181.
37. *Ibid.*, p. 168.