Abstract
We argue that Kraay’s “theistic multiverse” response to the objections to theism [11] is unsuccessful as it simply shifts the problems leveled against theism from the level of possible worlds to the level of possible universes. Furthermore, when we restate the objections at the level of possible universes, we can show how Kraay’s conclusion about the uniqueness of the theistic multiverse is undermined.

Keywords: multiverse, possible world, problem of evil, theism, universe

1 Introduction
The “theistic multiverse” is an account of the nature of possible worlds that purportedly solves various objections against theism that are raised by interpreting possible worlds as universes. Multiverse theodicies, whether as solutions to various anti-theistic arguments or motivated by other reasons, have been argued for or espoused by, among others, the authors of [2, 11, 12, 16, 21, 22]; for an overview on what has also been called “multiverse deism”, see [4, 5, 9]. In this paper we focus specifically on Kraay’s account [11], because of a particular criticism that can be leveled against it: Namely, all of the problems that he hopes to solve by introducing a multiverse account of possible worlds can simply be replicated at the level of universes.

Our plan is as follows: In the next section, we briefly summarize Kraay’s multiverse account, defining key terms, and showing how he thinks it can respond to certain challenges to theism. This allows us, in §3, to prove the main result of the paper, namely, that Kraay has not solved the problems, merely shifted where they occur. We also show how this undermines his original arguments. In §4, we look at a response
which raises similar — but not identical — problems for Kraay’s account, due to Johnson [6]. We conclude in §5.

2 Kraay’s theistic multiverse

According to Kraay, “a universe is a spatiotemporally interrelated, causally closed aggregate” [11, p. 359], and a multiverse is a world that comprises more than one universe [11, p. 359]. Thus, universes are not identified with possible worlds, nor are possible worlds “physical containers for universes” [11, p. 360]. Rather,

a possible world is simply comprised of whatever universes there are in that world, together with whatever nonphysical entities there are [11, p. 360].

The following are consequences of and constraints on Kraay’s account, which either hold by definition or are argued for by Kraay (the details of the arguments need not concern us here):

1. Possible worlds either contain one universe or more than one universe.

2. In a possible world with more than one universe, all universes within the world must be “logically compossible: by definition, there can be no logical contradiction between different universes within one possible world” [11, p. 360].

3. At most one copy of any universe can be present in a possible world [11, p. 360].

4. The same universe may be present in more than one possible world.

5. There is trans-universe identity, but no trans-world identity [11, p. 360].

Kraay introduces these multiverses to solve a trilemma for theism: He argues that if all worlds are comprised of a single universe (hence allowing us to identify possible worlds and universes), then “it seems that either there is (a) exactly one best possible world [EOUW]; or (b) more than one unsurpassable world [IMUW]; or (c) an infinite hierarchy of increasingly better worlds [NUW]” [11, p. 355], and each one of these has, historically, been argued to be incompatible with the existence of an omnipotent, omniscient, and omnibenevolent being [11, p. 357]. With
the introduction of multiverses, Kraay can divorce the identification of possible worlds with universes, allowing for there to be multiverses that contain a variety of pretty crummy universes (such as, apparently, ours), so long as these universes still meet some minimal axiological threshold, without those mediocre universes threatening the status of a given possible world (i.e., multiverse) as being the best possible world. (In fact, Kraay goes one step further to argue that the particular multiverse he has in mind is the only possible world; we discuss this further below, at the end of §3).

Kraay takes it as definitional that God will create every universe that is (i) creatable and (ii) worth creating (measured against some objective benchmark), and therefore proposes the Theistic Multiverse (TM) thesis:

God creates and sustains all and only those universes which are worth creating and sustaining. Furthermore, TM comprises no other universes [11, p. 363].

Further furthermore, this theistic multiverse simply is a possible world—and not only that, the only possible world [10, pp. 365–366]. It is therefore the best possible world, and this is compatible with our universe, which is in this possible world, being subpar. This solves the trilemma, by rejecting (b) and (c) and demonstrating how (a) is compatible with classical theism.

3 Revenge

Our main thesis in this paper is the following: All of the possible-worlds objections leveled against the theist that Kraay says his theistic multiverse account responds to can be revised and re-applied to his account of universes instead. This undermines his arguments in two ways: First, it shows that he hasn’t solved the problem, merely moved it. Second, when we re-run the arguments at the level of universes rather than worlds, then we are in a position to revisit Kraay’s argument against their being infinitely many possible worlds, and show that his conclusion (a) EOUW cannot be maintained.

Kraay himself would admit that our fundamental question, namely, “Is there any threat of revenge, that is, can the same objections to possible worlds be re-run at the level of universes?”, is a legitimate one; after all, he says that “the axiological framework of possible worlds... can now be applied, mutatis mutandis, to universes” [11, p. 360]. If we can
transfer talk about good-making and bad-making properties, we can also transfer talk about comparing universes. It then follows that “either there is exactly one unsurpassable universe [EOUU], or else there are none [NUU], or else there are infinitely many [IMUU]” [11, p. 360, labels added]. Thus, we can shift the discourse from the level of possible worlds (as it is in [11]) to universes.

So we are in a position to ask which of the following is true:

**EOUU** there is exactly one unsurpassable universe.

**NUU** there are no unsurpassable universes.

**IMUU** there are infinitely many unsurpassable universes.

We take each in turn below, but first, note that Kraay’s TM thesis does not by itself require that there be more than one universe which is worth creating and sustaining; however, we can reject this possibility, because otherwise the TM possible world would not be a multiverse, but a universe, and we would be back in the original situation, of there being at most one possible world worth creating/sustaining (comprising only one universe) and therefore exactly one unsurpassable possible world. If there is to be a genuine trilemma between the three options, and if the multiverse account is to not be degenerate, we can conclude that on Kraay’s proposal there must be at least two universes that are worth creating and sustaining. We shall call these universes $u_1$ and $u_2$.

### 3.1 EOUU

Suppose there is exactly one unsurpassable universe, $u^*$: It follows that this universe is one that is both worth creating and worth sustaining; for if it were either not worth creating or not worth sustaining, then it would not be unsurpassable, for both $u_1$ and $u_2$ are plausible candidates to surpass it. So we know that $u^*$ is worth creating and worth sustaining. Then the question is: Is it the universe that we inhabit or not?

If it is the universe we inhabit, then the original problem of evil arises: Our *a posteriori* experience shows that this universe is a rather meager one; surely an omnipotent, omnibenevolent, omniscient being could’ve done a better job. Even if one of the *worlds* (that is, multiverses) that this universe is a member of is unsurpassable, this doesn’t address the fact that this *universe* still seems like it could have been better.

If the unsurpassable universe is not the one we inhabit, then we do not inhabit an unsurpassable universe; we could have been in another,
better one. Surprisingly, Kraay thinks that “there is no particular reason to expect that we would find ourselves in an unsurpassable universe” [11, p. 365]. But then we are faced with the question of why a surpassable universe is one that is (1) worth creating and (2) worth sustaining. If God could have put us (where by “us” we can mean either the actual humans that are, have, and will exist in this universe, or humanity in general, whatever universe they exist in) in a better universe than the one that we are in, then why put us in this universe at all? Why is this universe—deficient in so many ways—worth creating and sustaining? Without answers to these questions, we are left in an awkward position. Again, the traditional problem of evil is lurking in the wings: Why would a omniscient, omnipotent, and omnibenevolent God put humanity in a universe which is not the best possible one? If anything, the problem is even worse here than in the previous case, for if we have been placed in the unsurpassed universe, that is a threat to God’s omnipotence (why couldn’t he have created a better one?); but if we have been placed in a surpassed universe, then it is God’s intrinsic goodness that is called into question, for he could have put us in a better universe and didn’t.

Now, there may be reasons why the most benevolent thing God could do was put humanity in a universe that was not the best universe; but the burden of proof lies on being able to produce those reasons. Without them, we have no reason to believe that a surpassable universe is one that is either worth creating or worth sustaining, not when God could clearly have done better. Therefore, on balance, we can discount EOUU as a sustainable option.

3.2 NUU

Suppose instead that there are no unsurpassable universes, but that every universe (including \(u_1\) and \(u_2\), and whichever universe is the one we inhabit) has a universe that surpasses it. In this subsection, we show that this option cannot be sustained at the level of universes.

We start from the suggestion in the previous subsection that a surpassable universe is one that is not worth creating and sustaining, then we can easily show that this option collapses into the previous.

First, let us agree that there is at least one universe worth creating and sustaining, namely, the one that we occupy. In fact, per the foregoing, we already know that there are at least two universes (\(u_1\) and \(u_2\)), and possibly three if the universe we occupy is distinct from both \(u_1\) and \(u_2\).
Now, by what we argued in the previous section, if we have two universes, one of which surpasses the other, then only one of them is worth creating and sustaining; the other is not. If we have more than two, we can do a similar pairwise comparison across all the universes, for instance, comparing $u_1$ and $u_2$, comparing $u_2$ and $u_3$, and comparing $u_1$ and $u_3$. If we do so, then there are three possible results: Either (1) we will be left exactly one universe, which surpasses all others and is unsurpassed, or (2) we will be left with at least one infinite ascending chain, or (3) there is at least one incomparable (or equivalent) pair of universes (and in fact, we will show that in such a case there would be infinitely many incomparable (or equivalent) universes).

The first case would occur if the pairwise comparison of all the universes resulted in a maximum, a world that is better than all the other worlds. But if it surpasses all the others, then all the others were, contra assumption, not worth creating and sustaining. In this case, we are not in a theistic multiverse at all but a theistic monoverse, of the very worst kind because not only is it a monoverse, because not only is the “TM” the only possible world, we can’t even find another universe to inhabit in this possible world. So if we wish to maintain multiverse theism, we must take one of the other options. We cover option (3) in §3.3, after we first show that (2), there is an infinite ascending chain of universes, is problematic.

Let $\mathcal{U}$ be the set of universes (containing, amongst others, $u_1$, $u_2$, the actual universe, as well as universes that are not worth creating or not worth sustaining) and $u'$ and $u''$ be arbitrary members of $\mathcal{U}$, with axiological statuses $\sigma'$ and $\sigma''$, respectively. Either $\sigma' < \sigma''$, $\sigma'' < \sigma'$, or neither surpasses the other (either because $\sigma' = \sigma''$ or because $\sigma'|\sigma''$). If either $\sigma' < \sigma''$ or $\sigma'' < \sigma'$, then one universe surpasses the other, and we will exclude the surpassed one as being not worth creating or sustaining, and retain the surpassing one. Then we can pick another universe from $\mathcal{U}$, and compare its axiological status to the one we kept; again, if they are comparable but not identical, we will always throw away one of them away, for this is just what it means for there to be an infinitely ascending chain. But if the chain ascends infinitely, then there would be no universe that would be created, because no universe that is surpassed is worth creating and sustaining, and if there is an infinitely ascending chain then every universe in that chain is surpassed; given that there is such a created universe (namely, the one we inhabit), it cannot be the case that this pairwise comparison would go infinitely. Therefore there must at some point be either one universe that surpasses all others
(in which case we’re in the previous situation) or we have at least two universes that are either incomparable or equivalent in axiological status; these then, are both unsurpassable.

Kraay himself argues that incommensurate possible worlds must exist \cite{7}, and uses this fact to undermine the rational choice model of divine creation \cite[p. 13]{17}. But are these \textit{worlds} (i.e., multiverses) or \textit{universes}? If his argument is about possible worlds, then Kraay is contradicting his conclusion in \cite{10}, where he demonstrated that there is only one possible world. If, however, he is using “worlds” not in the technical way he uses the term in \cite{11}, but following more ordinary usage to refer to universes, then we have corroboration from Kraay himself of a position which rejects NUU.

Therefore, if we have at least two created universes that are incomparable or equivalent in axiological status, it follows that they are all incomparable or equivalent; for if any were strictly worse, they would not have been worth of creation and sustenance. We thus \textit{do} have, contra Kraay, a particular reason to expect to find ourselves in an unsurpassable universe, namely, because all created universes are unsurpassable.

3.3 IMUU

Now let us consider the final option, that there is at least one pair of incomparable or equivalent worlds. We show that this option enforces a stronger option, namely, that there are infinitely many such worlds.

From the preceding we already know that there are at least two unsurpassable universes. The original argument in favor of there being infinitely many surpassable \textit{worlds} (rather than universes) is easy to transfer to universes. The original argument goes as follows: “This view is generally supported by the thought that for any world $w$ having axiological status $s$, there is a trivially different variant, $w'$, that also has axiological status $s$” \cite[p. 357]{11} (the objection against the theist then being: Well, why would God actualize one of these variants rather than another? He does not act without reason, but what reason could he have for picking on trivial variant over another?). Kraay successfully blocks this argument at the level of worlds by arguing that there can be at most one multiverse. But what happens when we shift our focus from possible worlds (i.e., multiverses) to universes?

Because we can speak of axiological statuses of universes just as easily as we can speak of axiological statuses of multiverses\cite{3}, it follows that for any universe $u$ having axiological status $\sigma$, there is a trivially different
variant, $u'$, that also has axiological status $\sigma$ (for instance, let us consider the universe exactly like the one we inhabit, but where my trans-universe counterpart is 1cm taller than me; there is no reason to suppose my height will affect the axiological status of either universe). That there are infinitely many ways that universes could be so varied is incontestable. (If you do not like the height-variation argument, then consider the more innocuous case of a universe identical to ours except for the number of grains of sand on Seaham beach.)

But if we can re-run the infinitely many trivially different universes argument, then we are also able to have infinitely many trivially different ways of collecting just as many good universes into a multiverse. The issue we then face is this: We have infinitely many unsurpassable worlds, each of which differ from each other trivially, and hence have the same axiological status. Now, consider the possible worlds that can be made up by taking sets of these universes. (That is, let $W \subseteq \mathcal{P}(U)$ be the set of possible worlds, such that every $w \in W$ is a multiverse.) If there are infinitely many universes, it follows that there are infinitely many multiverses where the sum (or average; it doesn’t matter which measure you pick) of the axiological statuses of their universes are indistinguishable. Now, this alone is not sufficient to say that the axiological statuses of the multiverses are therefore indistinguishable, because the axiological status of a multiverse is not a function of the statuses of its contained universes in this way. But at this point, it then becomes unclear why it should be the case that the multiverse which contains all of these infinitely trivial many variations should be better than a multiverse that is lacking, say, one of them, simply because the former contains more.\(^4\) (In fact, why do we not go the other way and say: If there are infinitely many trivially different universes, why would God create all of them instead of just one? There is no clear reason why God would create all the trivial variants, especially when doing so does not increase the overall axiological status of the multiverse that contains all of them.)

But even setting aside this possible response, assuming that God does create all the infinitely many trivially different universes, taking away one of these infinite variants cannot change the goodness of the resulting multiverse: The two multiverses will still have exactly the same axiological status. In fact, there will be infinitely many axiologically equivalent multiverses containing different infinite subsets of these trivially different universes. Thus, not only have we shown that the objections that can be leveled against possible worlds can also be leveled against universes; we have also shown that Kraay’s original conclusion, that there is exactly
one multiverse, cannot in fact be sustained.

4 Other literature

We are not the first to find problems with multiverse theism or theistic multiverses, whether Kraay’s or other variants. Others who have argued against these so-called “multiverse theodicies” (or have at least argued for their revision) include the authors of [1, 3, 13, 14, 15, 20]; however, as they do so on radically different grounds than we do here, we do not discuss their objections further. Instead, we concentrate on one person who does make a similar-looking—but ultimately distinct—argument against Kraay, namely, Johnson [6].

Johnson specifically responds to the viability of the theistic multiverse to respond to what he calls the problem of no best world, due to Rowe [18, 19]. This is the problem of

the seeming impossibility of God’s existence given the fact that the possible world that God actualizes must be unsurpassable if he is to be the greatest possible being, yet it seems that for any given possible world he could actualize, there is one greater [6, p. 448],

that is, it’s a variant of the “Can God create a rock so big he couldn’t lift it?” problem, and it arises in conjunction with the assumption of IMUW.

Though this is not a problem that Kraay discusses directly in [11], Johnson outlines how multiverse theists such as Kraay could respond to the problem in the first pass: By doing what we have done above, and shifting attention from the level of possible worlds to universes:

But the problem of no best world arises because of the assumption that possible worlds consist of only one universe... However, there are possible worlds that contain multiple universes. In other words, some possible worlds are multiverses. God wouldn’t have to just create one universe, but could create a multiverse, and in doing so God could actualize the greatest possible world [6, p. 451].

Johnson does not find this response satisfactory, and the way that he argues that multiverses cannot solve this problem shows takes up a similar line of argumentation to what we have argued above. He argues that there are two reasons why the multiverse account fails to solve this
problem. These are (1) the problem of no highest standard and (2) the problem of multiverse cardinality [6, p. 447]. It is the latter, which turns on questions of the cardinality of multiverses, which is interestingly similar to our objections above. The question is this:

What is the cardinality of the infinite multiverse that makes up the greatest possible world? [6, p. 459].

In our reply above, we did not mention different levels of infinite cardinality; all that mattered for our argument was that the cardinality be infinite. Johnson, however, argues that no matter which cardinality of universes the best multiverse has, there is always a greater cardinality that it could have. Thus, while we argue that there is no way to discriminate between all multiverses of the same cardinality that are made up of universes which differ from each other only trivially, Johnson’s point is that we can discriminate between multiverses of differing levels of cardinality, with, presumably, those of higher cardinality having higher axiological status.\(^5\)

Now, Johnson’s objection relies upon there being uncountably many universes, whereas ours succeeded with merely countably many. We stress this not to discredit Johnson’s objection, merely to indicate a way in which it diverges from ours. Should an adequate argument for the cardinality of universes being uncountable be provided, his objection would stand.

5 Conclusion

What we have shown here is that multiverses do not get around the trilemma that classical theism faces, at least if we take multiverses to operate in the way that Kraay does. Moving from possible worlds to sets of possible worlds (for, despite his vocabulary, this is what Kraay is doing; there is no reason in principle why we need to identify possible worlds with multiverses each containing universes, rather than identifying possible worlds with universes and multiverses with sets of possible worlds—in fact, doing so partly obscures the fact that Kraay has only moved the problem rather than solved it) does not remove the trilemma, merely moves it. Once the trilemma has been moved to the level of universes, we can also show that Kraay’s original argument, for there being only one theistic multiverse, is undermined.\(^6\)
Notes

1 We follow Kraay in saying that worlds are actualized while universes are created by God, because “while worlds are necessarily-existing states of affairs, and are hence actualized rather than created, universes are contingently existing spatiotemporal entities, and are thus created rather than actualized [11, fn. 25, emphasis in the original].

2 Penner himself argues contra, that even if there are incommensurate possible worlds, this does not undermine the rational choice model [17].

3 Note that for our argument, we do not need to motivate any particular axiological principles to be used to determine the status of a given universe; we can leave it completely open so long as there is at least one principle via which we can ascribe positive or negative status to a universe. Kraay notes that though this position can be questioned, “it is widely granted in contemporary analytic philosophy of religion” [8, p. 30, fn. 4], including himself, it seems reasonable to take this as given.

4 Note that our objection here is not the same objection as the one Kraay considered in [11, fn. 35], for he starts from the supposition that there is only a finite number of universes. This is not a plausible supposition, and when we move from finity to infinity, his cardinality argument no longer holds.

5 Contra this, however, see [3].

6 Many thanks to the comments of the anonymous referee, which resulted in either my argument or the presentation of it being strengthened and clarified. Any remaining issues of argumentation or clarity remain mine alone.


