

7 Best Worlds and Multiverses

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Multiverse cosmologies promise solutions to some intractable problems in philosophical theology, in particular the problem of evil and the problem of suboptimality.¹ Assuming the actual world is a multiverse, theists can concede that our universe U is a suboptimal universe—as it evidently is—but affirm that U is necessary to the actualization of the best possible world. Theists can also concede that there are evils E that serve no greater purpose in U —as there evidently are—but affirm that E is necessary to the actualization of the best possible world.

Since every instance of evil in every universe is necessary to the actualization of the best possible world, there is no pointless evil in any universe. There is certainly evil that is unnecessary to any greater good *in the universe*, and this gives the illusion that there is pointless evil. But the problem of evil is resolved.²

Further, there are no better possible worlds than the actual world. Our world is not suboptimal. There are certainly universes that are better than ours, and this gives the illusion that our world is suboptimal. But the problem of suboptimality is resolved.

Multiverse solutions to the problem of evil and the problem of suboptimality depend on modal theses M1 and M2:

- M1. Necessarily, there is a world that includes every universe whose overall value is n or greater, for positive n .³
- M2. Necessarily, God actualizes a world that includes every universe whose overall value is n or greater, for positive n .

The metaphysical thesis in M1 entails that every possible universe whose overall value is n or greater (for positive n) is included in some single world, W . If possible worlds might overlap with respect to universes, then some universes U in W might also be included in other worlds W' . If possible worlds do not overlap with respect to universes, M1 entails that there is a world that includes a duplicate of every universe whose overall value is n or greater.⁴

It is difficult to see how multiverse solutions to the problem of evil and the problem of suboptimality might depend instead on the weaker modal theses. Consider, for instance, the thesis in M1':

M1'. Necessarily, there is a world that includes every universe whose overall value is n or greater, for *some* positive n or other.

The thesis in M1' entails that every possible universe whose overall value is n or greater for some positive n (or other) is included in some single world, W' . But we cannot be sure that W' is a best possible world without assuming an arbitrarily restricted principle of recombination.⁵ For instance, let W' include duplicates of every universe whose overall value exceeds some large finite value. W' is a best possible world only if the principle of recombination rules out worlds that include duplicates of every universe whose overall value exceeds some slightly less large finite value. But there is no nonarbitrary reason to believe that the principle of recombination is suitably restricted.

A world that includes a duplicate of every universe whose overall value is on-balance good is a best possible multiverse.⁶ Let's say that the set of universes that are included in the best possible world is the set of good enough universes. M2 entails that, necessarily, God actualizes the world that consists in all of the good enough universes. If M1 and M2 are true, then the problem of evil and the problem of suboptimality are easily resolved.

My aim is to show that thesis expressed by M2 is false. It is possible that God does not actualize the best possible world. Indeed, it is true in every world that God might have actualized a suboptimal world. The argument I advance does not assume that God lacks any divine attribute in any world in which he exists. God's attributes include essential omnipotence, essential omniscience, essential perfect goodness and necessary existence. So, God has those properties in every possible world. The argument does not assume that there are any possible worlds in which God is unable to actualize the set of good enough universes.⁷ It is a necessary truth that God can actualize a world that includes all and only the good enough universes.

Further, the argument makes no assumptions concerning the nature of free will. Libertarian accounts of free will might be correct, but strong or weak compatibilist accounts of free will might also be correct. The argument makes no assumptions concerning the principle of alternative possibilities.⁸ It is consistent with the argument that agents are morally responsible for what they do, even when they are unable to do otherwise. Morally significant actions have moral value even when every moral agent is unable to go wrong.

If M2 is false, then, necessarily, God might not actualize a world that includes every positive-valued universe. Indeed, I aim to show that God might not actualize a world that includes every positive-valued universe though God *can* actualize a world that includes every positive-valued

universe. I conclude that multiverse solutions to the problem of evil and the problem of suboptimality fail. But that's only because we do not need a solution to the problem of evil and the problem of suboptimality.⁹

SOME PRELIMINARIES

A possible world is a maximal or complete state of affairs. A state of affairs *W* is maximal just in case it is true, for each state of affairs *S*, that *W* includes *S* or *W* excludes *S*. Let's call the (full or partial) instantiation of a possible world *W* a universe or cosmos, *U* of *W*. Let's assume that a world *W* might include several states of affairs *U* each of which constitutes a distinct universe of *W*. We allow that the universes in *W* might be 'island universes' causally isolated from all other universes in *W*.¹⁰ But, as we understand 'possible worlds', the (indexical) phrase 'the actual world' uttered in any island universe *U* of *W* refers to *W*, and not merely to the isolated part of *W* in which the phrase is uttered.¹¹

If a world *W* includes more than one universe, the universes together constitute the cosmoi or multiverse *M* of *W*. Since a universe of *W* might be a partial instantiation of *W*, *U* might not be an exhaustive instantiation of the states of affairs in *W*.¹² We assume that no world includes more than one multiverse. So, multiverses *M* of *W* must be full or complete instantiations of *W*.

We'll say that God actualizes a world *W* just in case either God causes every contingent state of affairs in *W* or God brings about the largest state of affairs that he can unrestrictedly or strongly actualize in *W*.¹³ A world obtains just in case its universe(s) exist(s).¹⁴

Let's stipulate that there is a best possible world, *W_B*, that includes all of the universes, or duplicates of all of the universes, whose overall value is positive. We make no assumptions about the number of universes in *W_B*. *W_B* might include a finite number of universes, where each *U* in *W_B* has an overall value of *n* or greater for positive *n*. *W_B* might include infinitely many universes each of which has a value of *n* or greater. *W_B* might include uncountably many improving universes, each of which is *n* or greater in value.

If the best possible world includes every universe whose overall value is *n* or greater, then it includes some universes that are morally perfect and some universes that are naturally perfect.¹⁵ Some regard the natural perfection of a world as easier for God to achieve, since God can strongly actualize a naturally perfect world. In morally perfect universes, moral agents always freely go right with respect to their morally significant actions.¹⁶ The morally good states of affairs in universes are the result of moral agents freely going right with respect to morally significant actions and the morally evil states of affairs in universes are the result of moral agents freely going wrong with respect to morally significant actions.

Moral agents in perfect universes are free in a sense relevant to being morally responsible for what they do. We assume that morally significant

actions have moral value only if moral agents are free in the sense relevant to being morally responsible for what they do. We make no assumptions about the proper account of free will. If libertarian accounts of free will are correct, then moral agents in perfect universes are libertarian free. If a strong or weak compatibilist account of free will is correct, then moral agents in perfect universes are weak or strong compatibilist free.

We grant that there are no worlds in which God lacks the power, knowledge, or goodness necessary to actualize the best possible world. There are no worlds at which the set of actualizable worlds is distinct from the set of possible worlds. God can unrestrictedly actualize the best possible world.¹⁷

THE ARGUMENT AGAINST M2

We have stipulated that there is a best possible world, W_b , that includes all of the universes, or duplicates of all of the universes, whose overall value is on-balance positive.¹⁸ This is the assumption in M1 and is regarded as important to the multiverse solutions to the problem of evil and the problem of suboptimality.

1. W_b is the best possible world.

Since we have assumed that there are no limitations on God's power to actualize worlds, it is necessary that God can actualize W_b .

2. Necessarily, God can actualize W_b .

Let's suppose that God's attributes are inconsistent with his failing to avail himself of the option of actualizing W_b .¹⁹ If God's attributes are consistent with his failing to avail himself of the option to actualize W_b , then there is nothing especially problematic in God's actualizing a suboptimal world. Indeed, there is nothing especially problematic in God actualizing worlds that include unjustified evils.²⁰ God does not actualize any world that is less than the best unless he lacks either the power or goodness or knowledge to actualize the best world.

3. Necessarily, God can actualize W_b only if God does actualize W_b .

It follows from (2) and (3) that God must actualize the best possible world W_b .

4. Necessarily God actualizes W_b .

Since W_b is the best possible world, it will include all universes that are on-balance good, among them many universes that are morally perfect.

Morally perfect universes contain no moral evil, but they vary in the amount of moral good they include. A morally perfect universe might include only a few moral agents, each of whom performs only a few small acts of beneficence. The universe would be morally perfect but it would not contain much moral good. Another morally perfect universe might include many moral agents who are always going right with respect to many large acts of beneficence. The universe would also be morally perfect, but it would of course contain much more moral value.

But most of the moral value of morally perfect universes is due to moral agents observing moral prohibitions against the violation of individual rights. These are moral agents fulfilling the typically negative duties that form the fundamental requirements of justice. It's widely agreed, even among consequentialists, that the demands of justice are the weightiest or most important requirements of morality. Moral theorists as diverse as Hume (1981), Kant (1953), Rawls (1975), Nozick (1975), Gauthier (1987), and Cohen (2008) all agree on the relative importance of the requirements of justice. The requirements of justice prohibit the violation of basic moral rights such as the right to life, the right to freedom, and perhaps political, property and economic rights.

Call the set of morally perfect universes included in the best world U_B . U_B includes those universes where every moral agent always goes right with respect to the requirements of beneficence and justice. The agents in those universes not only maximize beneficence but they also constrain their behavior in ways that ensure the observance of the rights of all. Since the requirements of justice are the most important moral requirements, the universes in U_B are extremely valuable. Indeed, we know that W_B includes every extremely valuable, morally perfect universe in U_B .

Conversely, we know that W_B includes none of universes in which every moral agent always goes terribly wrong with respect to the requirements of beneficence and justice. Call that set of universes U_E . The agents in the universes in U_E not only maximize maleficence but also violate all of requirements of justice.²¹ Since the requirements of justice are the most important moral requirements, the universes in U_E are extremely disvaluable.

5. W_B includes every extremely valuable, morally perfect universe $U_B = \{U_{B0}, U_{B1}, U_{B2}, \dots, U_{Bn}\}$ in which all moral agents always observe the requirements of justice and beneficence and W_B excludes every extremely disvaluable, morally imperfect universe $U_E = \{U_{E0}, U_{E1}, U_{E2}, \dots, U_{En}\}$ in which all moral agents always violate the requirements of justice and beneficence.

According to premise (4), God necessarily actualizes W_B . It follows from God's nature, presumably, that he cannot fail to avail himself of the option of actualizing the best world W_B . And it follows from unrestricted actualization that there is no world in which God does not have the option of actualizing

W_B . So, the set of universes in W_B not only exhaust the actual universes that obtain, they exhaust the *possible* universes that exist. Premise (4) entails that the set of actual universes just is the set of all possible universes.

According to premise (5), W_B includes all of the extremely valuable, morally perfect universes in U_B and W_B contains none of the extremely disvaluable universes in U_E . And according to premise (4), W_B includes all possible universes. (4) and (5) are both true only if W_B includes all of the *most valuable* universes, none of the *least valuable* universes and W_B includes all of the *possible* universes.

But (4) and (5) are not consistent. It can be shown that if W_B includes all of the most valuable universes in U_B and none of the least valuable universes in U_E , then, if W_B is the best possible world, then premise (4) is false. W_B does not contain all of the possible universes. Indeed, W_B is the best possible world and includes all and only universes in U_B only if W_B excludes some genuinely possible, *extremely bad* universes.²²

This presents a serious problem for multiverse solutions to the problem of evil and the problem of suboptimality, since it entails that M2 is false. It is simply not necessary that God actualize the best possible world W_B . It is possible that God can actualize W_B , but actualizes instead an extremely bad, suboptimal world.

Propositions (4) and (5) Are Inconsistent

As we have noted, much of the moral value of the universes in U_B is the result of moral agents observing requirements to constrain their behavior within the bounds of justice. So, much of the moral value of the universes in U_B is the result of moral agents freely choosing not to actualize worlds that include morally unjust universes.

Compare the universe U_{E0} in U_E and the universe U_{B0} in U_B . Let U_{E0} be a universe in which all of the moral agents in U_{B0} go terribly wrong with respect to the requirements of justice and beneficence. We know that there is such a universe, since much of the value in U_{B0} is the result of moral agents freely deciding not to go terribly wrong.²³ We may let U_{E0} be a universe of vast and profound injustice, a universe of horrendous suffering and extreme harm. It is among the most stringent requirements of justice in U_{B0} that moral agents are prohibited from bringing about any world that includes the universe U_{E0} . And by hypothesis the moral agents in the morally perfect universe U_{B0} are strictly conforming to those stringent requirements. Universal conformity to the requirements against actualizing any world that includes U_{E0} fulfills some of the most important requirements of justice in U_{B0} and so contributes a great deal to the moral value of U_{B0} .

6. The fact that moral agents in U_{B0} all conform to the requirements not to actualize any world that includes U_{E0} contributes to the moral value of U_{B0} .

But universal conformity to moral requirements not to actualize any world that includes U_{E0} contributes to the moral value of U_{B0} only if it is at least *metaphysically possible* for moral agents in U_{B0} to actualize a world that includes U_{E0} .²⁴ If the moral agents in U_{B0} conform to requirements not to actualize any world including U_{E0} as a matter of metaphysical necessity, then it is uncontroversially true that their conformity to these requirements is not freely exercised. And if universal conformity to the requirements of justice is not freely exercised, then such conformity does not contribute to the moral value of U_{B0} .

7. Conformity to requirements against the actualization of a world that includes U_{E0} contributes to the moral value of U_{B0} , only if it is metaphysically possible for moral agents in U_{B0} to actualize a world that includes U_{E0} .

Suppose it is metaphysically impossible for moral agents in U_{B0} to actualize a world that includes the universe U_{E0} . In that case it is of course metaphysically necessary that all moral agents in U_{B0} conform to the prohibitions against the actualization of a world including U_{E0} . No matter what the moral agents in U_{B0} might do, those agents necessarily conform to the requirements against actualizing a world that includes U_{E0} . But if it is metaphysically necessary that all of the agents in U_{B0} conform to the requirements against the actualization of U_{E0} , then, on any account of the nature of free will, no moral agent in U_{B0} freely conforms to the prohibitions against the actualization of U_{E0} .

Consider a strong compatibilist account of free will. According to strong compatibilists, alternative possibilities (of action) are necessary for free will and moral responsibility.²⁵ So, strong compatibilists are committed to a version of the principle of significant freedom (PSF).²⁶

PSF. A moral agent S is significantly free with respect to A only if S could have done other than A.

A person is significantly free relative to action A only if S is free in the sense relevant to S's being morally responsible for A. PSF entails the weaker principle of genuine possibilities (PGP). No moral agent is significantly free with respect to any action unless she satisfies PGP.

PGP. A moral agent S is significantly free with respect to A only if there is a metaphysically possible world in which S does other than A.²⁷

According to strong compatibilism, if a world including U_{E0} is not metaphysically possible, then the moral agents in U_{B0} do not freely comply with the moral restrictions not to actualize a world including U_{E0} . But then universal conformity to the restriction against actualizing any world that includes U_{E0} does not contribute to the moral value of U_{B0} .

Consider instead weak compatibilism. According to weak compatibilists, moral agents are free in the sense relevant to moral responsibility only if those agents exhibit the proper sort of control with respect to their actions. But a moral agent has the proper sort of control with respect to an action A only if there is a possible world in which the agent has sufficient reason to do other than A and he does otherwise.²⁸ So, no moral agent has the proper sort of control unless he satisfies PGP. If moral agents in U_{B_0} do not satisfy PGP, then universal conformity to the restriction against actualizing any world that includes U_{E_0} does not contribute to the moral value of U_{B_0} .

Finally, of course, on libertarian accounts of free will, a moral agent S is relevantly free with respect to action A only if S is able or has it within his power to do other than A . So libertarian accounts of free will are also committed to both PSF and PGP.

On any account of free will, the moral agents in U_{B_0} freely conform to the requirements against the actualization of a world including U_{E_0} only if it is at least metaphysically possible that the moral agents in U_{B_0} actualize a world including U_{E_0} . Conformity to moral requirements against the actualization of a world including U_{E_0} contributes to the moral value of U_{B_0} only if it is metaphysically possible for moral agents in U_{B_0} to actualize a world including U_{E_0} .

In the morally perfect universe U_{B_0} , the fact that moral agents conform to requirements against the actualization of a world including U_{E_0} constitutes a very important source of moral value. Indeed, adherence to the requirements of justice is the most important source of moral value in U_{B_0} as it is in any universe. So, it must be at least metaphysically possible for moral agents in U_{B_0} to actualize U_{E_0} .

8. It is metaphysically possible that moral agents in U_{B_0} actualize a world including the extremely unjust universe U_{E_0} .²⁹

But it's metaphysically possible that moral agents in U_{B_0} actualize a world including the extremely unjust universe U_{E_0} only if U_{E_0} is included in W_B . Recall that, according to (4), the set of actual universes in W_B just is the set of all possible universes.

9. The universe U_{E_0} is included in W_B .

But recall also that, according to premise (5), W_B includes none of the extremely disvaluable universes in U_E . So W_B does not include U_{E_0} . U_{E_0} is a universe of vast and profound injustice, a universe of horrendous suffering and harm. It is among the most stringent requirements of justice in U_{B_0} that moral agents not actualize U_{E_0} .

10. The universe U_{E_0} is not included in W_B .

(9) and (10) constitute an explicit contradiction. They cannot both be true. We know by premise (5) that W_B includes all of the universes in U_B and none of the universes in U_E . But we found that U_{B_0} is included in W_B only if U_{E_0} is included in some metaphysically possible world. The moral value of U_{B_0}

is in part the result of moral agents conforming to the requirement not to actualize those metaphysically possible worlds that include U_{E0} .

Therefore, there must be a possible world W' diverse from W_B that includes U_E . But if there is a metaphysically possible world W' , then premise (4) is false and so is the thesis in M2. God does not necessarily actualize W_B . But there are additional consequences following from the rejection of (4). If (4) is false, then so is premise (3). We have granted that God can unrestrictedly actualize the best possible world W_B , and so it is true in every world that God can actualize W_B . But we must reject (3). It is not a necessary truth that God can actualize the best possible world only if God does actualize the best possible world.

CONCLUDING REMARKS

According to multiverse solutions to the problem of evil and the problem of suboptimality, there is a world W_B that includes all of the on-balance good universes—or duplicates of all of the on-balance good universes—and God necessarily actualizes that world.

We noted that multiverse solutions to the problem of evil and the problem of suboptimality depend on theses M1 and M2. M1 ensures that there is a best possible world and M2 ensures that God actualizes *only* the best possible world.

- M1. Necessarily, there is a world that includes every universe whose overall value is n or greater, for positive n .
- M2. Necessarily, God actualizes a world that includes every universe whose overall value is n or greater, for positive n .

We noted that if M1 and M2 are true, then the problem of evil and the problem of suboptimality are easily resolved. Every instance of evil in every universe in W_B is necessary to the actualization of the best possible world and the greatest amount of goodness, so there is no pointless evil in any universe. Further there are no better possible worlds than W_B , since there are no other worlds than W_B . So, our world is optimal among worlds.

But we showed that M2 is false. Indeed it is simply not possible that, in every possible world, God actualizes a world that includes every universe whose overall value is n or greater, for positive n . We grant that there is a world W_B that includes all and only universes whose value is n or greater for positive n . W_B will no doubt include, among other universes, all of the best universes in U_B . We argued that, among the universes in U_B , there are morally perfect universes such as U_{B0} whose moral value is due to universal conformity to the requirements of justice and beneficence. We argued that universal conformity to requirements prohibiting the actualization of universes such as U_{E0} does not contribute to the moral value of U_{B0} unless there are worlds that include universes such as U_{E0} . And we concluded that if W_B includes all of the best universes in U_B , and none of the worst universes in

U_E , then there are worlds diverse from W_B that include all or some of the universes in U_E .

If there is a world W_B and diverse worlds W' , then God does not necessarily actualize W_B . God possibly Will Defense depends actualizes W' which includes some of the worst possible universes in U_E . The thesis in M2 is false, and indeed it is necessarily false. It is necessarily true that God cannot actualize the best possible world W_B unless it is possible for him to actualize much worse possible worlds W' . Since M2 is necessarily false, multiverse solutions to the problem of evil and the problem of suboptimality fail. The good news is that, since M2 is necessarily false, there is no problem of evil or problem of suboptimality to resolve.³⁰

NOTES

1. What I am calling the 'problem of evil' is really a set of problems related in complex ways. The basic problem is that there is pointless and eliminable evil or it seems very probable that there is pointless and eliminable evil. And the existence of such evil is not consistent with the existence of an Anselmian God. What I am calling the 'problem of suboptimality' is sometimes called the 'problem of less than best'. The basic problem is that the actual world is very probably not the best possible world. And the existence of a suboptimal world is not consistent with the existence of an Anselmian God.
2. The multiverse solution to the problem of evil might seem to turn on the question of whether our universe is good enough to be included in a multiverse. This is a red herring for a variety of reasons. A multiverse that solves the problem of evil can have universes of any value whatsoever. What matters is that the evil in those universes is justified and that the multiverse is optimal. Neither of these depends on the overall value of the universes.
3. It is not crucial that n be positive, so long as the multiverse is the exclusively possible world.
4. Multiverse solutions to the problem of evil and the problem of suboptimality are confused in a variety of ways that I don't pursue. It is never observed, for instance, that if God necessarily actualizes a multiverse M then M is the best possible world, *no matter how bad the universes are that compose M* . The multiverse solution to the problem of evil, for instance, would be resolved if M were composed of universes that included only horrific moral and natural evils. Each one of those evils would be necessary to the actualization of the best possible world, M . The value of universes that compose M is irrelevant to the theodicist's goals. It is also never observed that God cannot choose the universes to instantiate in M , since there are no possible universes except those in M , according to multiverse theodicies.
5. Cf. Lewis (1986, Section 1.8).
6. Might there be on balance good worlds that God cannot actualize? Klaas Kraay reminds me that some universes might be on balance good but contain large amounts of terrible evil. Perhaps God could not actualize such worlds, but this would invoke another principle of moral perfection besides the requirements of choosing optimal worlds and worlds without gratuitous evil.
7. Recall that Alvin Plantinga's Free Will Defense depends on its being possible that the set of actualizable worlds is not the set of all possible worlds. I do not make any such modal claim. See Plantinga (1974, esp. Section IX).

8. There is a large body of literature and various more or less useful analyses of the principle. The most important discussions begin with Frankfurt (1969).
9. It is false both that God cannot coexist with gratuitous evil and that God must actualize an optimal world. See Almeida (2012).
10. See Bricker (2001) and Lewis (1986, Section 1.6). Lewis does not allow for a single world to have spatiotemporally isolated parts. For the sake of discussion, I am conceding that there might be such worlds.
11. For persuasive reasons that 'the actual world' is not an indexical, see van Inwagen (1980).
12. The issue is more complicated. It is true for each universe U of world W that the states of affairs in U are maximal. U is such that, for every state of affairs P , U includes or precludes P . In short, for each universe U of W , every proposition p is either true or false in U . We'll say that a proposition p is true in a world W just in case p is true in a universe U of W . Additional assumptions are necessary to ensure consistency in worlds including the assumption that individuals are universe-bound.
13. For the differences among strong actualization, weak actualization and unrestricted actualization, see Almeida (2012, Chapter 4).
14. I take universes to obtain iff. they exist, since they are instantiations (perhaps partial instantiations) of worlds.
15. It should be noted that near-perfection would serve the argument just as well. By 'a naturally perfect world' I mean a world that includes no natural evil.
16. An action A is morally significant for an agent S iff. it would be morally right for S to perform A and wrong for S not to perform A or vice versa. See Plantinga (1974, 166ff.).
17. See Almeida (2012, 108ff.).
18. As noted above in note (2), the foregoing sentence, though typical in the exposition of multiverse solutions to the problems of evil and suboptimality, is strictly speaking not coherent. We will learn that there is only one possible world, so such a world *could not* contain duplicates of any universe in any world except itself.
19. For prominent examples, see Mackie (1955) and Rowe (2002).
20. There is insufficient discussion of this point in the literature. It's often assumed without much argument that God cannot actualize a world that includes a single instance of gratuitous evil but God might actualize a suboptimal world. God might be permitted to actualize a suboptimal world, it is urged, because there might not be a best possible world. But the problem is much more difficult than that. Consider C .

C . For any world W in which there is no evil, there is a better world W' in which there is some evil.

If there is no best possible world, then C is likely true. But the problem is even more difficult. The argument that God can actualize a world with no evil W when there is a better world with some evil W' cannot appeal to *equality principles*, because C' is also likely true.

C' . For any world W in which there is no evil, there is a world W' in which there is evil that is both better than W has more evil than W .

In W' , for instance, each person might suffer one unit of subnoticeable (or just noticeable, if its insisted) pain, and also enjoy equal amounts of happiness,

and *W'* might be better overall than *W*. For much more on these issues in a different context, see Parfit (1984, Chapters 17–19) and Temkin (1993).

21. Is it possible for all agents to violate all requirements of justice? It is difficult to see why not, though we might be able to conjure up a case where *S*'s violation of moral requirement *R* at time *t* is one that *S'* could not simultaneously violate. But I'm placing no such restrictions on violating all of the requirements of justice.
22. This is not because I'm stipulating that U_E is nonempty, which would yield the result trivially. But I'm also not claiming that such an argument could not be cogently advanced here.
23. Aylish Chantler and Klaas Kraay urge that there need not be a world in which every member of a morally perfect world always goes wrong. There need only be several worlds in which each sometimes goes wrong. There in fact needs to be both. There are various ways in which moral agents can go wrong, individually and collectively, and each of these is prohibited by the requirements of justice. The failure to go wrong in any of these ways is what makes a morally perfect world so valuable.
24. This might be construed as an incipient, very weak version of PAP. The alternate possibilities in this case need not be options that an agent is *able* to bring about. They need only be options that are not metaphysically impossible. There is more discussion of this point below.
25. See David Lewis (1981, 116–17). Compare Lewis's illustration of strong compatibilism:

Had I raised my hand, a law would have been broken beforehand. The course of events would have diverged from the actual course of events a little while before I raised my hand, and at the point of divergence there would have been a law-breaking event—a divergence miracle, as I have called it. But this divergence miracle would not have been caused by my raising my hand . . . Nor would it have been caused by any other act of mine, earlier or later. (116–17)

26. See Plantinga (1974, 165ff.). Plantinga suggests a version of PSF that indexes the ability to act at distinct times. There are interesting questions concerning the conditions under which someone could have done otherwise or someone was able to do otherwise. Among the well-known sources, see Lehrer (1976), but see also Campbell (1997).
27. Note that PGP does not state that *S* is able to actualize a world in which *S* does other than *A*. PGP does not even require that a world in which *S* does other than *A* is nomologically possible. It requires minimally that such a world be metaphysically possible.
28. The relevant sort of control for weak compatibilists is typically guidance control. See especially Fischer (2012) and also O'Connor (2010).
29. Would God not allow a universe to get as bad as UE0? First, I'm certain that God cannot decide which worlds are possible by allowing or disallowing them. Worlds are necessarily existing objects, if they exist at all, so exist whether they are allowed or not. But second, there must be a universe UE0 if there is a universe UB0. The existence of the latter entails the existence of the former. That is a central argument in the essay.
30. Thanks to Klaas Kraay and Don Turner for many insightful comments that really improved the paper. I would also like to thank Don Page, Rich Davis, and members of the audience at the God and the Multiverse Workshop (Ryerson University, February 15–16, 2013) for extremely useful questions and comments.

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