

Commentary

Moral Responsibility and Time Travel in an Indeterministic World

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Abstract: I have argued against the Principle of Alternative Possibilities using a time travel-based counterexample. Kelly McCormick has responded to my counterexample by arguing that the time travel scenario must be a scenario in which a time traveler's actions are causally determined; hence, she claims, we should be suspicious of attributing moral responsibility to anyone in such a scenario. In this paper, I respond by arguing that one might be morally responsible in an indeterministic time travel scenario.

Keywords: principle of alternative possibilities; Frankfurt; determinism; indeterminism; time travel

1. Introduction

According to the Principle of Alternative Possibilities, someone is morally responsible for an action only if she could have done otherwise. More formally:

(PAP) necessarily, for any person S and any action A, S is morally responsible for performing A only if there is some action A* such that S could have done A* while failing to do A.

I, following Frankfurt [1] reject this principle. My argument against the principle involves the following time travel case [2] (p. 153):

Martin is a time traveler who, during one of his trips, rescued a high-wire walker who fell from his wire. The high wire walker was working without a net and would have died had Martin not intervened by pressing a button labeled "Emergency Safety Net Release". But, due to Martin's intervention, a safety net was deployed and the high-wire walker walked away from the situation unscathed. It turned out, though, that the high-wire walker was Martin's grandfather who, at the time of the fall, had not yet had any children or otherwise preserved his gametes for posterity.

I argue that Martin, in this scenario, is morally responsible for releasing the emergency safety net since he is praiseworthy or blameworthy for that action. I also argue that Martin could not have done otherwise. After all, if the safety net had not been released, then the man who is, in fact, Martin's grandfather would have plummeted to his death, and Martin would never have existed.

Kelly McCormick has responded to my counterexample by claiming that I am subject to a dilemma. Either Martin's action in the time travel scenario is causally determined or it is not. If it is causally determined, then we should be suspicious of the claim that Martin is morally responsible for what he has done. If it is not, then we should be suspicious of the claim that Martin could not have done otherwise. Either way, we should be suspicious of the putative counterexample. In particular, McCormick says that I am impaled by the first horn of the dilemma. She argues that the time travel scenario must be a scenario in which Martin's action is causally determined, and if Martin's action is determined in that scenario, then we should be suspicious of the claim that Martin is morally responsible for releasing the safety net.¹ This is a formidable challenge to my counterexample.

In this paper, I will defend my counterexample from this objection. First, I will argue that McCormick is mistaken when she claims that the time travel scenario must be a scenario



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in which Martin's action is determined. Second, I will argue that even if we assume that Martin's action is not determined, we have strong reason to believe that Martin could not have done otherwise. Hence, a defender of the time travel counterexample can dodge the first horn of the dilemma and reject the second horn. The time travel counterexample is sound.

2. McCormick's Argument: How Sharp Is the First Horn?

I believe and uses as a premise in my argument the following counterfactual claim:

(CF) If Martin had not released the safety net, then Martin would not have existed.

But McCormick argues that if (CF) is true, then so is the following:

(CD*) In any possible world that is like the actual world described in [the time travel scenario] all the way up to and including the time at which Martin comes into existence, Martin pulls the net.

And, moreover, she argues that (CD*) entails the following causal determinist thesis:

(CD) Martin's coming into existence as he did in the time travel scenario is causally sufficient for Martin's releasing the safety net.

Hence, McCormick concludes, given that I am committed to (CF), I am also committed to the claim that Martin's action is causally determined, and I am thereby impaled on the first horn of the dilemma.

Now, I have to admit, before I delve into McCormick's argument, that I am not sure exactly what (CD*) is saying. First, (CD*) refers to "the time at which Martin comes into existence." But at what time does Martin come into existence? Let us suppose that Martin was conceived and born in 1983. Then, at the age of 30, he time-traveled to 1943 and rescued his grandfather. Let us also suppose that Martin never made any other trips to the past. Then, at what time does Martin come into existence? Was it sometime in 1983, or was it sometime in 1943?

If McCormick were to say that Martin came into existence sometime in 1983, then (CD*) would be trivially true. After all, any world that is just like the actual world all the way up to 1983 will also be just like the actual world in 1943 and, hence, will include the fact that Martin saved his grandfather. So, if we hold fixed all the facts up to 1983, then we must hold fixed all the facts from 1943. But if that is what McCormick meant, then there is no way that (CD) follows from (CD*). After all, holding fixed the fact that Martin saved his grandfather in 1943 is perfectly consistent with claiming that he was not determined to do so. So, let us assume that when McCormick talks about "the time at which Martin comes into existence," she means to pick out a time in 1943.

Second, (CD*) quantifies over worlds that are "like the actual world described in [the time travel scenario] all the way up to and including the time at which Martin comes into existence". But which worlds are those? In what respect are they like the actual world described in the time travel scenario?² I suspect that McCormick wants to talk about those worlds that are intrinsic duplicates of the world described in the time travel scenario all the way up to and including the moment at which Martin comes into existence and that have the same laws of nature as the world described in the time travel scenario.³ Again, I will assume that that is what she meant.

Let us consider, then, the first move in McCormick's argument. Why should anyone believe that if (CF) is true, then so is (CD*)? Here is what McCormick says:

If (CF) is true then... there are no nearby possible worlds in which Martin exists and fails to pull the net. And if there are no nearby possible worlds in which Martin exists and fails to pull the net, we can say something about a particular class of nearby possible worlds, namely those worlds in which we hold fixed the features of the actual world described in [the time travel scenario] all the way up to the point at which Martin comes into existence. All of these possible worlds

will be worlds at which Martin releases the safety net. Given a commitment to (CF), and holding fixed the features of [the time travel scenario] as it is described, (CD*) is obviously true. [3] (p. 384)⁴

Here is how I am reading McCormick. She starts out by noting that, given the standard semantics for counterfactuals, if (CF) is true, then there are no nearby possible worlds in which Martin exists and fails to pull the net. Equivalently, if (CF) is true, then all nearby worlds in which Martin exists are ones in which Martin pulls the safety net. The next bit, though, is the tricky bit. Notice that (CD*) does not say anything about *nearby* possible worlds. It says something about *any* possible world that is just like the actual world described in the time travel scenario all the way up to and including the time at which Martin comes into existence. (CD*) is a much more general claim. And it needs to be to have any hope of entailing (CD). But then, there seems to be a gap in the argument. I think McCormick would bridge the gap by saying that *all* the possible worlds that are like the actual world described in the time travel scenario all the way up to and including the time at which Martin comes into existence *are nearby* possible worlds. Moreover, they are nearby worlds in which Martin exists. So, if (CF) is true, then we can conclude something about those nearby worlds. Specifically, it seems to follow that if (CF) is true, then all the possible worlds that are like the actual world described in the time travel scenario all the way up to the point at which Martin comes into existence are possible worlds in which he pulls the net. But that is just (CD*). So, if (CF) is true, then so is (CD*). Here is a formal statement of the argument:

- (1) If (CF) is true, then all nearby worlds in which Martin exists are ones in which Martin pulls the safety net.
- (2) All the possible worlds that are like the actual world described in the time travel scenario, all the way up to and including the time at which Martin comes into existence, are nearby possible worlds in which Martin exists.
- (3) So, if (CF) is true, then all the possible worlds that are like the actual world described in the time travel scenario all the way up to and including the time at which Martin comes into existence are possible worlds in which he pulls the net.
- (4) So, if (CF) is true, then (CD*) is true.

This supporting argument appears to be valid and would, if sound, support the first step in McCormick's main argument from (CF) to (CD). However, I believe that there are at least two viable responses to this argument available. But first, let us fill out the details of the time travel scenario a bit and then see what the more detailed story implies about McCormick's argument and my time travel scenario.

Consider our initial time travel scenario from the introduction of this paper. Just as before, let us say that Martin time-traveled to 1943 and rescued his high-wire walking grandfather by deploying an emergency safety net. However, let's add to the story that there was a secondary deployment mechanism attached to the emergency safety net. This secondary mechanism, however, would be activated only if a highly improbable and indeterministic quantum event occurred. How improbable? I do not know that it matters but let us say as improbable as is possible given the laws of quantum mechanics. Or at least very close to the limits of physical improbability. Finally, let us add the innocuous claim that the improbable event did not occur.

Now, what should we say about McCormick's argument, given this more detailed version of the time travel scenario? I think it depends on whether certain highly improbable events that did not occur are modally distant.

3. Option 1: Certain Highly Improbable Mere Possibilities Are Distant Possibilities⁵

I think a case can be made for the claim that *certain* highly improbable mere possibilities are distant possibilities, specifically, those highly improbable mere possibilities that are causally independent of the antecedent conditions under consideration. What does this qualification add? Well, if someone flips a coin 10 times, resulting in a series of 10 instances

of heads coming up, then a possible scenario, just like the actual scenario, except that the third flip comes up tails instead of heads, would be a highly improbable mere possibility. But would it be a distant possibility? It depends on what the antecedent conditions under consideration are. Suppose that Nicholas bet that the coin would *not* come up heads ten times in a row. After losing the bet, Nicholas says, “if I had just bet that the coin would land heads ten times in a row, then I would have won”. Nicholas is right! In order to evaluate that counterfactual, we should hold fixed those facts that are causally independent of whether or not the antecedent obtains. Since the coin actually landed heads ten times in a row, and that fact is causally independent of Nicholas’s bet, we should hold that fact fixed. So, the highly improbable mere possibility that is just like actuality, except that the third flip comes up tails, is a distant possibility.⁶

Now, in the time travel scenario, the indeterministic trigger attached to the secondary deployment mechanism did not go off, and that fact is causally independent of whether or not Martin presses the emergency safety net release button. When considering the antecedent of (CF), then, we should hold fixed the fact that the secondary deployment mechanism did not go off. So, the highly improbable mere possibility of the secondary deployment mechanism being triggered is a distant possibility. So, there are possible worlds that are like the actual world described in the time travel scenario all the way up to and including the point at which Martin comes into existence, which are *distant* possible worlds. These are worlds in which Martin appeared, just as he did in the time travel scenario, but failed to deploy the safety net *and* in which the improbable event occurred. These are worlds in which the occurrence of the improbable event caused the secondary deployment mechanism to activate, thereby saving Martin’s grandfather and making possible Martin’s own existence. But if there are these more distant, improbable worlds, then the key premise (2) is false.

Let us suppose that Martin’s coming into existence as he did in the actual world was not causally sufficient for his pulling of the emergency safety net. That seems to imply that his action was not causally determined. But, according to the second horn of the dilemma, if his action was not causally determined, then we should be suspicious of the claim that he could not have done otherwise. Am I, then, subject to the second horn of the dilemma? No. Martin’s deployment of the emergency safety net is not causally determined because there are worlds that are just like the actual world described in the time travel scenario all the way up to the point at which Martin comes into existence (and perhaps beyond) that are worlds in which Martin does not deploy the net. These are those very distant worlds where the improbable event occurs. But as I pointed out in my original paper, when considering a similar objection, “These distant possibilities do not act as guardian angels; they do not protect truths about what Martin can do” [2] (p. 157). This response still seems absolutely right to me. There are distant possibilities in which Martin exists and fails to deploy the safety net, but that does not imply in the least that Martin could have refrained from deploying the safety net. It seems to me that, given our first option, the time travel counterexample dodges both horns of the dilemma, and the Principle of Alternative Possibilities is false.

4. Option 2: Highly Improbable Mere Possibilities Are Not Distant

Although I think a case can be made that certain highly improbable mere possibilities are distant, I can see how someone might disagree. Someone might claim that the highly improbable possibility of the secondary deployment mechanism being triggered is among the nearby possibilities in the time travel scenario. What, then, should we say about McCormick’s argument if these improbable possibilities are nevertheless nearby?

Well, in that case, I think we should accept that the argument (1)–(4) is sound but reject (CF). After all, on this option, there are nearby worlds where Martin does not deploy the safety net and does not exist *and* nearby worlds where Martin does not deploy the safety net and exists. Given that fact it cannot be that (CF) is true. That is, it cannot be that if

Martin had not deployed the safety net, then he *would* not have existed. Rather, we should say that if he had not deployed the safety net, then he *might* not have existed.

But that does not mean that my time travel counterexample to PAP is doomed to fall to the second horn of McCormick's dilemma. I used (CF) in an argument for the conclusion that Martin could not have done otherwise, thus establishing one half of the time travel counterexample. But I might argue instead as follows. (A) If Martin had not deployed the safety net, then very probably Martin would not have existed. Moreover, (B) the highly improbable scenarios in which Martin would have existed are scenarios in which Martin exists by mere chance; Martin exists in those scenarios merely because a highly improbable quantum event occurred and triggered the secondary deployment mechanism. But (C) Martin has no control over that highly improbable indeterministic event. Given (A), (B), and (C), Martin could not do otherwise than he, in fact, does. So, it seems to me that, given our second option, the time travel counterexample again dodges both horns of the dilemma, and the Principle of Alternative Possibilities is false.

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Notes

- ¹ Or a bit more carefully, if Martin's actions are causally determined, then we should find the claim that he is morally responsible plausible only if we've already given up on PAP.
- ² Technically speaking, there are lots of worlds described by the time travel scenario. But we can arbitrarily pick one and focus our discussion on it.
- ³ Thus, McCormick's claim would be an instance of a general van Inwagen-style nomological determinist thesis.
- ⁴ I have corrected a minor typographical error in this quote.
- ⁵ Thank you to an anonymous referee for pushing me to think about improbabilities and closeness a bit more carefully. I am grateful for the referee's careful comments, especially on the issues discussed in this section.
- ⁶ For a detailed discussion of closeness and casual independence, see Schaffer [4].

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