

The consequence argument and the possibility of the laws of nature being violated

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Abstract

In a recent paper, Brian Cutter objected to the consequence argument due to its dependence on the principle that miracle workers are metaphysically impossible. A miracle worker is someone who has the ability to act in a way such that the laws of nature would be violated. While there is something to the thought that agents like us do not have this ability, Cutter claims that there is no compelling reason to regard miracle workers as metaphysically impossible. However, the paper contends that miracle workers are indeed impossible according to well-known theories concerning the laws of nature. This result highlights the reliance of the consequence argument on a plausible premise, which is widely accepted by proponents of non-Humean views of laws. The paper also provides a way to explain away the intuition that miracle workers are possible, but this has the upshot that a recent, two-dimensional formulation of the consequence argument is unsound.

Introduction

It has long been claimed that Peter van Inwagen's (1983) consequence argument is the most powerful argument for incompatibilism in debates over the compatibility of free will and determinism. As Neil Levy and Michael McKenna write: "The consequence argument is very powerful. It has been credited with breaking the compatibilist hegemony over the free will debate" (Levy & McKenna 2009:

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97). While there have been numerous different objections to it, Brian Cutter (2017) has gone one step further by arguing that, contrary to appearances, the consequence argument is not even an argument for incompatibilism. In other words, Cutter has argued for the following claim:

- (A) The consequence argument, though it may be sound in its standard formulations, does not support any thesis that could reasonably be called “incompatibilism”.

No doubt, the truth of (A) would significantly affect the overall dialectic surrounding the free will debate; it would provide the last nail in the consequence argument’s coffin. It does not even matter whether the argument is sound, for it would merely be an *ignoratio elenchi*.

As we will see, Cutter’s argument for (A) is based on what he identifies as a lack of good, positive arguments to support the so-called Necessary Fixity of the Laws. In particular, he sees no reason to rule out the possibility of miracle workers, where a miracle worker is someone who has the ability to act in a way such that the laws of nature would be violated. In the next section, I will elucidate Cutter’s objection. However, to preempt any suspense, I concur with his observation that *if* the consequence argument is an argument for a narrow type of incompatibilism (one that rules out miracle workers) *then* it is not really an argument for incompatibilism.

Nonetheless, I will also demonstrate that the possibility of miracle workers is inherently implausible across a broad spectrum of perspectives on natural laws. In other words, I will establish that the principle of the Necessary Fixity of the Laws follows from fundamental assumptions within prevailing theories of laws. In particular, the principle is entailed by standard dispositionalist/powers accounts of the laws, and the principle of Nomic Preservation, which has been applied in a number of thought experiments (developed by John Carroll, Michael Tooley, and others) that are thought to invalidate the Humean, best system account of laws.

While I have framed this paper as a response to Cutter’s objection, the significance of the result extends beyond its initial appearance. First, the result highlights the reliance of the consequence argument on a plausible premise, which must be accepted by the majority of proponents of the governing views of laws (and, as I will show, some non-governing views as well). Second, it serves as a case study to support a more methodological claim: that in order to proceed with arguments in the metaphysics of free will in a systematic manner, one must first get one’s account of laws straight. Finally, at the end of the paper, I argue why one might erroneously accept the possibility of miracle workers. This, however, still has an important consequence for the debate, for it shows that the recent, two-dimensional formulation of the consequence argument is unsound.

1 The consequence argument and Cutter’s objection

In its most discussed form, the consequence argument employs a sentential operator N , which was originally used by van Inwagen to abbreviate “ p and no one has, or ever had, any choice about whether p ”. Yet, if the conclusion of the argument is to follow from the premises, we require a more rigorous formal definition for N . The most plausible formalisation I am aware of, in which the consequence argument emerges as valid, employs what is known as the “counterfactual” interpretation of the N operator.

$$Np := p \wedge \forall x \forall \mathbf{a} [\text{Can}(x, \mathbf{a}) \supset (\text{Does}(x, \mathbf{a}) \Box \rightarrow p)]$$

where $\Box \rightarrow$ is a subjective conditional, x ranges over persons and \mathbf{a} ranges over all possible past, present and future action types; $\text{Can}(x, \mathbf{a})$ and $\text{Does}(x, \mathbf{a})$ are left unanalysed (Pruss 2013: 435). This definition of N is what Michael Huemer (2000) calls the “no matter what” interpretation. To say that no one has any choice about whether p is to say that no matter what action any person did within her abilities, p would (still) be true. So, on this interpretation, the following deductive rules turn out to be valid:

$$(\alpha) \Box p \vdash Np$$

$$(\beta) Np, N(p \supset q) \vdash Nq$$

Now, let L stand for the conjunction of the laws of nature, P_0 for a true proposition about the total state of the world in the (remote, pre-human) past and p any true proposition. Here is the argument:

1	$\Box((L \wedge P_0) \supset p)$	determinism
2	$\Box(L \supset (P_0 \supset p))$	modal logic, 1
3	$N(P_0 \supset (L \supset p))$	$\alpha, 2$
4	NP_0	premise
5	$N(L \supset p)$	$\beta, 3, 4$
6	NL	premise
7	Np	$\beta, 5, 6$

The first premise expresses the idea about what follows from determinism, that if determinism is true, then p is strictly implied by P_0 and L . Premise 4 states that no one has or ever had a choice concerning the distant (pre-human) past, whereas Premise 6 states that no one has or ever had a choice about any natural law. Given Premise 4 and Premise 6 and the fact that p is arbitrary,

the conclusion is there is no action anyone can do such that, if one were to it, p might be false.

Cutter’s objection turns on a simple point, which has been frequently noted in the literature: that in order to be regarded as an argument for incompatibilism, the consequence argument’s conclusion cannot merely be the material conditional:

$$(M) \quad \Box((L \wedge P_0) \supset p) \supset Np.$$

Why? Cutter tells us:

(M) is not a modal statement and therefore does not assert the incompatibility of any two propositions. Nor is it a thesis about which paradigmatic compatibilists and incompatibilists would necessarily disagree. A compatibilist might accept (M) simply because she denies the antecedent (2017: 279).

This instructive passage suggests a desideratum that the consequence argument needs to meet if it is to threaten compatibilism:

Main Desideratum: The consequence argument’s conclusion cannot be a thesis about which paradigmatic compatibilists and incompatibilists may agree.

If the main desideratum is not met, then the consequence argument’s conclusion does not support a thesis that deserves the name “incompatibilism”. In contrast to (M), the corresponding strict conditional:

$$(SI) \quad \text{Necessarily, if determinism is true, then } Np$$

meets the main desideratum, and consequently is a thesis that could reasonably be called “incompatibilism”.

The problem, however, is that the standard formalisation of the consequence argument does not support (SI). For if the standard formalisation were meant to establish (SI), then it would be a modal fallacy. As Ted Warfield (2000) observed, Premises 4 and 6 are not presented as necessary truths. And in order to prove a strict conditional of the form $\Box(p \supset q)$, one must appeal to propositions that are necessarily true in between the assumption of p and the conclusion q . In this fashion one might think that the incompatibilist has to defend the necessary truths of premises 4 and 6.

Yet, precisely speaking, the incompatibilist need not defend the necessary truth of those premises, but rather the necessary truth of the principles underlying them, as Cutter puts it:

To be precise, the requirement here is not to show that NP_0 and NL are necessary truths. Clearly these claims are contingent.¹ [...] Rather, what

¹As noted by an anonymous reviewer, Cutter’s assertion that NL is “clearly” contingent may be deemed overly assertive: the way that NL is “clearly” contingent seems to depend on NFL being clearly false; but it isn’t clearly false. Now, I think the reason why NL seems clearly contingent is that most philosophers think that L is contingent, and since N is a factive operator, if L is contingent, NL will be contingent as well.

the strict incompatibilist needs are principles roughly along the following lines:

Necessary Fixity of the Past (NFP): for every world w , there is a time t prior to the existence of any rational agents (or at least prior to the first moment at which an agent begins to deliberate about anything) such that, in w , NPw, t (where Pw, t is a complete specification of the state of w at t).

Necessary Fixity of the Laws (NFL): for every world w , it's true in w that NL_w (where L_w is a conjunction of all the laws of nature that prevail at w) (2017: 281-82).

His goal, then, is to establish that the main desideratum cannot be met because we have no good reason to accept (NFL).

If (NFL) is true, then premise 6 follows, that is, L is true and no matter what action any person did within her abilities, L would still be true. However, why should we think that the Necessary Fixity of the Laws is true?

According to Cutter, the answer is far from clear. His argument appeals, as he says, “to creatures in the far reaches of modal space, creatures whom” he calls miracle workers (Cutter 2017: 283). First, Cutter’s idea is that the possibility of miracle workers entails the falsity of (NFL). He defines a miracle worker as follows: s is a miracle worker in w if, and only if, s has, in w , the ability to do something such that, if she did it, the laws that prevail in w would be violated. And he also introduces the notion of a coy miracle worker: a coy miracle worker is a miracle worker who never exercises the ability to violate the laws of nature. What premise 6 in the consequence argument tells us is that no one is a miracle worker. Cutter agrees that this premise is actually true, but disagrees that it is necessarily true:

Although I find it implausible to suppose that actual human beings are miracle workers [...] I do not have any trouble with the claim that it’s possible for there to be miracle workers. After all, there are all sorts of bizarre things out in the far reaches of modal space – seven-headed monsters, golden mountains, and talking donkeys, for instance. And if it’s possible that there should be miracle workers, then surely it’s possible that there should be coy miracle workers (Cutter 2017: 283).

The claim is not that it is obvious that miracle workers are possible, but that “we do not have good positive reason to think they are not possible” (Cutter 2017: 284).

Now, why should one worry about the possibility of miracle workers? Because, given the current debate, the consequence argument will not be up to the task of establishing a conclusion about which (paradigmatic) compatibilists and incompatibilists will disagree.

All of this may be demonstrated by discussing premise 4 and the Necessary Fixity of the Past. In an influential paper, Joseph Campbell (2007) argued that the consequence argument does not support strict incompatibilism because it relies on the existence of a remote, pre-human past. Again, this is because we

have no good, positive reason to rule out the possibility of eternal agents, agents who have existed since the beginning of time. In a universe where, say, Adam opted to raise his arm at its initial moment, NP_0 would appear to be false. So NP_0 seems to be true only in worlds at which there are no agents like Adam.

The upshot is that Campbell's critique literally prompted the entire field to change expressions of the consequence argument. In fact, in response to Campbell, incompatibilists retreated to a restricted incompatibility thesis stating that freedom and determinism are incompatible for agents *relevantly* similar to us, for instance: Necessarily, if determinism is true, then no one who lives in a world with a remote, pre-human past, has free will. While Campbell forced incompatibilists to change expressions of the argument, this restricted thesis is a thesis that deserves the name "incompatibilism" because it is still a thesis about which paradigmatic incompatibilists would accept and paradigmatic compatibilists would reject.²

However, due to the well-known debate between David Lewis (1981) and van Inwagen, this type of strategy is not available to address the problem of miracle workers. Suppose incompatibilists propose to get rid of it, in analogy with the response to Campbell, by defending a restricted form of incompatibilism:

Restricted Thesis: Necessarily, if determinism is true, then no one who lacks the ability to act in such a way that the laws of nature would be violated has free will.

Cutter points out that this restricted thesis cannot be reasonably called "incompatibilism" because it violates the main desideratum. That is, the restricted thesis may be accepted by paradigmatic compatibilists, namely, those who support Lewis's response to the consequence argument (Graham 2008; Lewis 1981; Oakley 2006; Pendergraft 2010).³ And if the consequence argument aims at establishing the restricted claim, it cannot be an argument for incompatibilism, but for another thesis altogether.

Thus, it is vital for the incompatibilist to argue against the possibility of miracle workers. Better: since Cutter's main claim is that we do not have good positive reason to think miracle workers are not possible, it is vital for the incompatibilist to argue that there is, at least, *some reason* to think that miracle workers are impossible. If so, then there is no need to assume that the consequence argument is an argument for the restricted thesis, which – as Cutter correctly points out – does not support incompatibilism.

²For replies to Campbell along these lines, see Bailey (2012), Loss (2009, 2010), Brueckner (2008). See also Campbell (2008, 2009).

³By Lewis's response I *literally* mean Lewis's own reply to the consequence argument that presupposes his theory of counterfactuals. Some philosophers, such as Kadri Vihvelin (2013), argue that the Lewisian response does not depend on Lewis's theory of counterfactuals, since it only relies on a distinction between weak and strong abilities that may be accepted by a form of compatibilism that permits laws to be fixed. If this is correct, then the miracle workers problem might well turn out to be a problem similar to the Necessary Fixity of the Past. But because this view is far from being popular, my focus here will be on the Necessary Fixity of the Laws.

In what follows, I will demonstrate that miracle workers are metaphysically impossible according to well-known theories about the nature of laws.

2 How to argue for the necessary truth of NL

To begin with, it's crucial to keep in mind that there is a belief that the incompatibilist must specifically argue for the Necessary Fixity of the Laws because NL would obviously be viewed as contingent (Cutter 2017: 281). This is not right, however. The incompatibilist *can* in fact make a theoretically supported argument in favour of the necessity of NL . This argument relies on the now popular dispositionalist/powers accounts of the laws (Bird 2005, 2007; Demarest 2017; Kimpton-Nye 2017).

The argument is quite simple. Dispositionalists, such as those mentioned above, adhere to modal necessitarianism, the view that the laws of nature are metaphysically necessary. Let L stand for the conjunction of all natural laws. So modal necessitarians are committed to the following:

(MN) $\Box L$,

where the box stands for metaphysical necessity. This view is incompatible with the possibility of miracle workers. If laws are metaphysically necessary, then they are true “no matter what”. Remember that NL is true if and only if no matter what anyone can do, L would (still) be true; more formally, $L \wedge \forall x \forall a [\text{Can}(x, a) \supset (\text{Does}(x, a) \Box \rightarrow L)]$. Now, because L is necessarily true, there is no situation in which the counterfactual $\text{Does}(x, a) \Box \rightarrow L$ is false.

Put another way, given rule (α), NL can be deduced from $\Box L$.⁴

Moreover, we can show how modal necessitarianism supports the strong version which incompatibilists should argue for. The charge of modal fallacy can be avoided by appealing to the S4 axiom: $\Box \phi \rightarrow \Box \Box \phi$. Since modal necessitarianism strictly implies NL , that is, $\Box(\Box L \rightarrow NL)$, given (MN), we can infer $\Box NL$.

So, contrary to common belief, NL is not clearly contingent, since it is not obvious that modal necessitarianism is false, and so it is not obvious that L is contingent. As a result, there is no need to appeal to a principle such as the Necessary Fixity of the Laws in order to avoid the charge of modal fallacy. But more importantly, there is no evidence to suggest that the consequence argument does not support any position that might be referred to as “incompatibilism”. For those who believe in modal necessitarianism, like dispositionalists, the argument does serve to justify incompatibilism.

Cutter's objection to the consequence argument has no bite if one adopts modal necessitarianism. However, it may be urged that, despite the forego-

⁴It is interesting to see though that NL follows from $\Box L$ without assuming (α), but only the Lewisian duality, where $\Diamond \rightarrow$ stands for the might-counterfactual:

(L) $\phi \Diamond \rightarrow \psi \dashv\vdash \sim(\phi \Box \rightarrow \sim\psi)$

The following proof becomes available:

ing argument, the incompatibilist is in a bad spot because the cogency of the consequence argument would depend on a specific theory of the laws.

The challenge can be rephrased as follows: what kind of rationale shall we give for the Necessary Fixity of the Laws if the laws are metaphysically contingent? If the challenge is not fulfilled, the consequence argument will only hold weight for those who believe the laws are metaphysically necessary. This will be a difficulty since the soundness of the argument will be dependent on a particular interpretation of natural laws.

I'll now make the case that the incompatibilist can appeal to standard governing views of the laws to defend the Necessary Fixity of the Laws, even if laws are contingent.

3 How to argue for the Necessary Fixity of the Laws

To clarify how the incompatibilist might defend the Necessary Fixity of the Laws, I think it is best if we first first look at a key dispute between Humeans and non-Humeans concerning the metaphysics of laws. For the Humean, with the most notable example being Lewis's (1983, 1994) best system analysis, the laws of nature merely serve as summaries of events occurring in a world: "a contingent generalization is a law of nature if and only if it appears as a theorem (or axiom) in each of the true deductive systems that achieves a best combination of simplicity and strength", Lewis writes (1973: 73).

1	$\Box L$	
2	L	$E\Box, 1$
3	$Can(s, a) \wedge (Does(s, a) \Diamond \rightarrow \sim L)$	
4	$Does(s, a) \Diamond \rightarrow \sim L$	$\wedge E, 3$
5	$Does(s, a)$	
6	L	$E\Box, 1$
7	$Does(s, a) \Box \rightarrow L$	$\Rightarrow I, 5-6$
8	$Does(s, a) \Diamond \rightarrow \sim L$	$\wedge E, 3$
9	$\sim(Does(s, a) \Box \rightarrow L)$	$L, 8$
10	\perp	
11	$\sim(Can(s, a) \wedge (Does(s, a) \Diamond \rightarrow \sim L))$	$\neg I, 3-10$
12	$Can(s, a) \supset (Does(x, a) \Box \rightarrow L)$	$Taut. Consequence, 11$
13	$\forall x[Can(x, a) \supset (Does(x, a) \Box \rightarrow L)]$	$\forall I, 12$
14	$\forall x \forall a[Can(x, a) \supset (Does(x, a) \Box \rightarrow L)]$	$\forall I, 13$
15	$L \wedge \forall x \forall a[Can(x, a) \supset (Does(x, a) \Box \rightarrow L)]$	$\wedge I, 2, 14$

In response to this perspective, non-Humean philosophers frequently express dissatisfaction, asserting that it clashes with our intuitive understanding of natural laws. Specifically, philosophers like Heather Demarest (2017), Carroll (1994), and Tooley (1977) have contended that Lewis’s best system laws are unable to support all the counterfactuals that we expect laws to support. The objection is clearly expressed by Demarest:

To see the problem, consider a world with a single, massive particle at rest. This particle’s behavior is consistent with a wide range of different laws (Newtonian, general relativistic, etc.). Nevertheless, according to a Humean best system, that world’s laws – balancing simplicity, informativeness, and fit – would merely state that all particles remain at rest. Thus, on a standard account of law-derived counterfactuals, if a second massive particle were present, both would remain at rest. Intuitively, however, it is true (in some conversational contexts) that if a second massive particle were present, the particles would accelerate toward one another (2015: 337-8).

What is at stake here is the idea that laws should “support” counterfactuals. Why isn’t it a law that all of the bananas in my house are yellow? Because I cannot assert, while holding a green banana in my hand, that this banana would be yellow if it were in my house. Laws, on the other hand, are not like that. If it is a law of nature in our world that massive particles attract each other, as described for instance by the law of universal gravitation formulated by Newton, then it would (still) be true that massive particles attract each other even if there were only a single massive particle.

Another way to illustrate this point is to consider a modal principle employed by Carroll in his objection to the Humean best system view (Carroll 1994: 57-68), where \diamond_p means “physically possible”:

Carroll’s principle : If $\diamond_p p$ and q is a law, then if p were the case, then q would still be a law.

Suppose it is a law in the impoverished world described by Demarest that all particles remain at rest. Since it is physically possible that there is a second massive particle, if that massive particle were present, it would still be a law that all particles remain at rest, as per Carroll’s principle. But that seems wrong. It seems that these two particles would attract each other. Thus, the Humean best system analysis seems untenable.

Now, how does this set-up tell against the possibility of miracle workers? The idea that laws support counterfactuals can be encapsulated by the principle that laws are resilient under counterfactual suppositions that are logically consistent with them (Lange 2009; Loew and Yaag 2019). My argument will be that if we accept this principle and some plausible background assumption, then the Necessary Fixity of the Laws is true.

Nomic Preservation: The laws of nature L would still have been true under counterfactual suppositions that are logically consistent with them.

Notice that Nomic Preservation, although similar, is weaker (and thus more plausible) than Carroll's principle. This is because Carroll's principle fixes not only the truth of laws, but also their *lawhood*; Nomic Preservation is entailed by Carroll's principle, but not the other way around. Of course, Nomic Preservation is also a consequence of the typical dispositionalist/powers accounts, since necessary truths are true "no matter what".

The argument against the possibility of miracle workers has two premises. The first, naturally, is the principle of nomic preservation. The second premise is a harmless assumption, namely, that every action we can do is logically consistent with L .⁵ This assumption is more plausible than the principle of nomic preservation itself and must be accepted by Cutter if his argument is to hold any water, as we shall see soon.

Background assumption: Every action we can do is logically consistent with the laws of nature.

The argument is that, given (Nomic Preservation) and (Background assumption), we can infer that there is no action anyone can perform such that, if one were to perform it, L might be false.

More formally, the argument is as follows:

(Nomic Preservation) $\diamond(p \& L) \rightarrow (p \Box \rightarrow L)$

That is, for any true proposition p , if p logically consistent with L , then, if p were the case, L would still be the case.

(Background assumption) $\forall x \forall a [Can(x, a) \rightarrow \diamond(Does(x, a) \& L)]$

This assumption says that everything we can do is logically consistent with the laws.

The argument now takes the form of *reductio ad absurdum*. Suppose that there is some action someone can perform such that, if one were to perform it, L might be false:

1. $Can(s, a) \& (Does(s, a) \diamond \rightarrow \sim L)$.

From the background assumption, we can infer that the proposition that s does a is logically consistent with L :

2. $\diamond(Does(s, a) \& L)$.

Now, given Nomic Preservation, we can infer

3. $Does(s, a) \Box \rightarrow L$.

Notice that $Does(s, a) \Box \rightarrow L$ contradicts 1, given the Lewisian duality, since $Does(s, a) \Box \rightarrow L$ is equivalent to $\sim(Does(s, a) \diamond \rightarrow \sim L)$.⁶

⁵I am grateful to an anonymous reviewer for pointing this out.

⁶Here is a more detailed formulation of the argument:

The argument is thus valid in orthodox semantics for counterfactuals. Since both premises are to be regarded as necessary truths, the argument concludes that miracle workers are impossible. If we want to reject the conclusion, we must dispute at least one of the premises.

Let's start with the background assumption. I call it a background assumption because without it, Cutter's argument would have no bite. The main aspect underpinning this premise is that, necessarily, all actions that anyone can do are logically consistent with natural laws. But why is that? Couldn't someone just perform an action a that is itself logically inconsistent with L ?⁷ Isn't that Cutter's point after all?

The answer must be *no*; otherwise, one would be adopting what Lewis referred to as "the strong thesis", namely, the thesis that one is able to break the laws of nature. In his seminal 1981 paper, Lewis draws a distinction between two theses in which one can render the laws of nature L false:

Weak thesis: I am able to do something such that, if I did it, a law of nature would be violated.

Strong thesis: I am able to do something such that, if I did it, a law of nature would be violated either by my act itself or by some event caused by my act.

The strong thesis implies that I am able to break a law of nature, because the law would be violated either by my act itself or by some event caused by my act, for example, by throwing a stone faster than the speed of light. But the weak thesis does not have this implication. In fact, as Lewis points out, the opposite is true. I was able to do otherwise because a natural law had previously been violated. Lewis, as a compatibilist, merely accepts the weak thesis and, much like the incompatibilist, rejects the strong one.

Cutter is clear that the possibility of miracle workers is equivalent to the possibility of the weak thesis being true (2017: footnote 3). And his main original move was to show that incompatibilists cannot restrict their argument to agents who are not miracle workers. However, at least in the context of the debate between Lewis and van Inwagen, the incompatibilist surely can restrict their argument to agents who are not able to break the laws. This restricted version will still be a thesis about which Lewis and van Inwagen may disagree, so that the main desideratum would be accommodated. In any case, the main

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1. $Can(s, a) \& (Does(s, a) \diamond \rightarrow \sim L)$, assumption.
 2. $Can(s, a) \supset \diamond (Does(s, a) \& L)$, from (Background Assumption).
 3. $Can(s, a)$, from 1.
 4. $\diamond (Does(s, a) \& L)$, from 2 and 3.
 5. $\diamond (Does(s, a) \& L) \rightarrow (Does(s, a) \Box \rightarrow L)$, from (NP).
 6. $Does(s, a) \Box \rightarrow L$, from 5 and 4.
 7. $Does(s, a) \diamond \rightarrow \sim L$, from 1.

⁷I'm grateful to an anonymous reviewer for bringing this to my attention.

point here is that the incompatibilist *need not* restrict their argument in that way. All they need are the principle of nomic preservation and the background assumption, both of which are very plausible and provide good, positive reasons to think that miracle workers are impossible.

At this point, the sole option then is to question why one should embrace the previously formulated principle of nomic preservation. Drawing from the insights of Marc Lange (2009) and his meticulous examination of laws, I think much of what makes the principle appealing is that it preserves the intuition that laws are such that they keep or sustain the underlying structure of the cosmos. In other words, laws are not arbitrary or accidental, but rather are in charge of sustaining the order and regularity that we witness in nature.

Yet, even if we do not accept any of the above, it is important to maintain focus on the key points of our discussion. The incompatibilist need not demonstrate that Nomic Preservation is universally agreed upon. It is evident that Humeans, like Helen Beebe (2000), have contested it, arguing that the acceptance of Lewis's analysis of counterfactuals is enough to cast doubt on the principle. Instead, all the incompatibilist needs is to demonstrate that anyone endorsing the principle of nomic preservation *and* the plausible background assumption must also accept the Necessary Fixity of the Laws. This acceptance can be (and in fact has been) based on aspects that are independent of the determinism/free will debate. Consequently, the consequence argument need not be an argument for the restricted thesis, since it relies on premises that are weaker than a principle already accepted by mainstream non-Humean views of laws.

One could object to the argument by claiming that the nomic preservation principle is compatible with the possibility of *coy* miracle workers, where a coy miracle worker is someone who never exercises the ability to act in a way that the laws of nature would be violated. Laws are then counterfactually stable simply because miracle workers never exercise their abilities.

The problem with this objection, however, is that it treats the principle as if it were a contingent truth. Instead, the principle should actually be understood as claim about the nature of laws; not that they are resilient in standard contexts, but that they are so as a matter of necessity. A law is a law (at least partially) *in virtue* or *because* of the fact that it is counterfactually resilient in the above sense. Nomic Preservation is a feature of the laws that distinguishes them from merely accidental generalisations. Thus, there are no miracle workers precisely *because* the principle is true (and so laws are counterfactually resilient). NOT: laws are counterfactually resilient because miracle workers do not exercise their abilities.

The principle might be contingently true if we accepted a Humean, best system account of laws, since these laws merely systematise particular matters of fact. But it has long been observed that the consequence argument is unsound when we subscribe to this particular conception of the laws of nature. Of course, the consequence argument does not cease to be an argument for incompatibilism just because it relies on a non-Humean view of laws. In any case, it is important to note that certain dispositionalists, such as Samuel Kimpton-Nye (2017) and

Demarest (2017), maintain a best system view regarding laws while adopting an anti-Humean perspective concerning fundamental properties. Laws, in their views, are metaphysically necessary, even if they just systematise. So miracle workers are impossible even according to these new “Humean” views of laws. All of this shows that many philosophers, even those who aren’t directly involved in discussions over free will and determinism, might have compelling reasons to conclude that miracle workers are impossible.

4 Can we explain away the intuition that miracle workers are metaphysically possible?

So far I have shown that there is a conflict between the possibility of miracle workers and the principle of nomic preservation. We cannot hold both points of view at the same time. So, is there any way to explain away the alleged intuition that miracle workers are possible?

I think there is one, which is already known in the context of the consequence argument: we need to appeal to *counterfactual* conditionals (Lampert & Merluzzi 2021a, 2021b). The main idea is simple. While it may be metaphysically necessary that L is counterfactually stable with respect to suppositions logically consistent with it (such as human actions), as per the principle of nomic preservation, we may hold that it is at least *conceivable* that this is not so. For example, while it would still be a natural law that mass obeys the inverse square law if we were to act differently from the way we do, it could nonetheless turn out that this law might be different if the actual world were different. Given the way things actually are, L is counterfactually stable. But if the actual world itself could have been different, if we could take or conceive a different world as actual, then L *might not* be stable with respect to human actions.

As previously stated, the idea in question can be understood by combining the preceding claims with counterfactual conditionals. A *counterfactual* conditional differs from a counterfactual conditional involving a similarity relation between possible worlds in the Lewis-Stalnaker semantics. The distinction is that the former employs double-indexing (see Lampert & Merluzzi 2021a, 2021b), namely: p *counterfactually* implies q is true at a possible world w relative to a world v taken as actual iff at the most similar possible worlds z to w at which p is true relative to z considered actual, q is true at z relative to z considered actual.

In other words, while we can maintain that it is metaphysically necessary that there are no miracle workers, we can also maintain that it is not conceptually necessary. So laws are counterfactually stable with respect to human actions, but they are not *counterfactually* stable. Given the current state of the world, no natural law could be false in the nearest possible worlds where we do otherwise. However, some laws may be “violated” relative to different worlds conceived as actual, and thus one could have done or refrained from doing something such that a natural law would (counterfactually) be false. Thus,

one can maintain that miracle workers are metaphysically impossible, while also maintaining that they are conceivable or conceptually possible, in the sense that they might be false relative to different worlds taken as actual.

The upshot is that if we accept the claim that we may have a choice, in the counterfactual sense, about the truth of L , then this means that the two-dimensional version of the consequence argument, formulated in terms of counterfactual conditionals, is unsound. For that formulation relies on the premise that NL is true, where the N operator is now defined counterfactually instead of counterfactually. Thus, while Cutter's argument would fail to establish that the consequence argument is not an argument for incompatibilism, it would show nonetheless that the two-dimensional formulation of the argument is unsound.

5 Conclusion

Cutter claims that we have no good, positive reason to think that miracle workers are impossible. However, we have seen that, according to well-known theories about the laws of nature, there cannot be any miracle workers. Even if one is not willing to accept any of these theories, something is at stake here. One can propose this result as a refutation of Cutter's main argument, but even if he is ultimately correct, then the possibility of miracle workers must amount to a problem to a version of the principle that laws support counterfactuals.

However, I still maintain that the consequence argument does enough justice to qualify as an argument for incompatibilism. After all, Nomic Preservation is a well-motivated principle, particularly for those who are guided by the intuition that the laws of nature govern the events occurring in a world. Furthermore, the principle can and has been accepted independently of the free will debate. Finally, when we consider the potential existence of miracle workers in the context of *counterfactual* conditionals, we can potentially dispel the notion that they are metaphysically possible, arguing instead that their possibility is limited to the conceptual realm. Nonetheless, if we adopt this perspective, the two-dimensional expression of the consequence argument will be unsound.

All in all, discussions surrounding the consequence argument inherently involve implicit assertions about the nature of laws. However, these discussions frequently overlook the existing body of literature on the nature of laws. The paper establishes connections between the literature on free will and laws, and addresses an important objection to the consequence argument raised by Cutter.

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