WHAT DOES INDETERMINISM OFFER AGENCY?

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**Abstract**: Libertarian views of freedom claim that, although determinism would rule out our freedom, we are nevertheless free on some occasions. An odd implication of such views (to put it mildly) seems to be that indeterminism somehow enhances or contributes to our agency. But how could that be? What does indeterminism have to offer agency? This paper develops a novel answer, one that is centred around the notion of explanation. In short, it is argued that, if indeterminism holds in the right places, then the best explanation of the history of the world necessarily cites facts about our agency. Along the way, alternative proposals regarding the significance of indeterminism are considered and, ultimately, rejected in favour of the one developed in this paper.

Keywords: indeterminism; libertarianism; explanation; ineliminable explanation

1. Libertarianism and the Problem of Indeterminism

Let ‘Libertarianism’ be the conjunction of two claims: that if determinism is true, then none of us are ever free; but that, nonetheless, we are free on at least some occasions. Libertarianism has some serious challenges, but none more serious than what I shall call the ‘problem of indeterminism’, which runs roughly as follows. Presumably, our being *free* enhances or increases our sense of agency. Just as it is preferable to be a rational agent, say, so it is preferable to be a *free* agent. But according to Libertarianism, our being free requires the falsity of determinism. So, it looks as if Libertarianism implies that the falsity of determinism adds to our agency in a substantive way—that it is preferable to be an agent living in an indeterministic world rather than a deterministic one. But that’s deeply mysterious, if not incoherent. After all, indeterminism merely seems to introduce a certain kind of *randomness*—that some of our actual decisions, say, had an objective probability of less than 1 on certain occasions. How could such randomness *enhance* or *contribute to* our freedom or agency in a substantive way? Why should we prefer our world be indeterministic as opposed to deterministic? The Libertarian owes us a story here.

It will be helpful to have an example. To slightly modify a case from Peter van Inwagen [1983: ch. 4], suppose a thief is sitting in church when the collection plate passes by. The thief is deeply torn over whether to resort to his thievish ways and take the money from the plate or to instead start on a new path and let the money continue on its way. After a good deal of struggling with himself, his past gets the better of him and he steals from the plate. If determinism holds in this case, then the state of the world just prior to the thief’s decision, in conjunction with the laws, entails that he decide to steal from the collection plate. According to Libertarianism, this means the thief wasn’t free in his decision.

Now add a little indeterminism to the mix: suppose instead that the state of the world just prior to the thief’s decision, in conjunction with the laws, only makes it more probable than not that he decide to steal—the conjunction assigns an objective probability of 0.7, say, to his decision. Nevertheless, everything happens in exactly the same way: the plate passes in front of him, he struggles immensely, and eventually caves and steals from the plate. According to Libertarianism, the addition of indeterminism makes all the difference, granting him a significant sense of freedom in his decision. But how? With indeterminism in the picture, it simply seems (somewhat) *random* whether he decides to steal or refrain. How does such randomness *increase* or *enhance* his freedom or agency?

 Admittedly, this is a rough formulation of the problem of indeterminism, with different authors making the challenge more precise in various ways.[[1]](#footnote-1) This makes responding to the challenge in all of its versions an unwieldy task. So, instead of focusing on a particular formulation, I’d like to leave the challenge at this more general and intuitive level. We might put the challenge as a simple question: what does indeterminism offer agency?

To spoil the suspense, I’ll be arguing that indeterminism (in the right places) allows facts about our agency to play a certain kind of explanatoryrole in the world, what I’ll call an *ineliminable* explanatory role. To put it in a grandiose way, I’ll argue that if indeterminism holds (in the right places), then it is impossible to explain the history of the world (in a particular sense) without citing facts about our agency. Before developing my answer to the problem of indeterminism, I’ll first (very) briefly consider other answers that have been given, noting their various strengths and weaknesses. Doing so will put us in a better position to evaluate the answer developed in this paper.

2. Previous Solutions to the Problem of Indeterminism

2.1 Agent-Causal Solutions

We typically think of causation as fundamentally involving *events*: that the window broke because Suzy threw a rock at it. But according to some, causation can also fundamentally involve *agents*: that Suzy (full stop) caused the window to break. Importantly, on this view, instances of agent-causation are *not reducible* to instances of causation that merely involve events: it is Suzy *herself* that causes the window to break, and in a *fundamental* way. Several authors have argued that, with perhaps a little tinkering, agent-causation provides the most promising answer to the problem of indeterminism.[[2]](#footnote-2)

Specifically, agent-causal solutions to the problem of indeterminism endorse two claims: (i) that (free)agents have the power to be fundamentally or irreducibly causally involved in their (free) actions, and (ii) that this kind of power requires indeterminism.[[3]](#footnote-3) Return to the thief’s decision. If determinism is true, then according to the agent-causal solution, there is no room for the *thief* to play an irreducible causal role in the production of his decision to steal. Instead, it is merely certain mental states—his beliefs, desires, etc.—that bring about his decision. But if his decision is not determined, then his mental states in conjunction with the environment may make his decision *probable*, but not guaranteed. And that extra bit of room is where *he* can make an irreducible causal contribution: *he* can directly bring about his decision to steal in a fundamental and irreducible way.

Of course, this is hardly even a sketch of the agent-causal solution to the problem of indeterminism, as there are many distinct versions of it.[[4]](#footnote-4) But regardless of how it is made more precise, there is something attractive about it as a possible solution. The idea of playing a certain kind of *fundamental* or *irreducible* causal role is quite appealing. We want to be more than the product of our circumstances or experiences. We want to contribute something new and original to the world. By thinking of ourselves as playing a fundamental or irreducible causal role, we seem to be getting at these ideas and, thus, this part of the agent-causal solution looks quite promising.

Despite its promise though, the agent-causal solution has a number of unappealing features. First and foremost is the general notion of agent-causation. Many authors find this notion mysterious.[[5]](#footnote-5) We seem to have a pretty good grip on events causing events; we also seem to have a pretty good grip on agents causing events in a *reducible* or *non-fundamental* way. But it’s not clear what it means for an agent to cause an event in an *irreducible* or *fundamental* way.

Now, this worry for substance- and agent-causation has been around for some time, and many authors have sought to address it.[[6]](#footnote-6) Unfortunately, evaluating it is far beyond the scope of this paper. For our purposes, it is sufficient to note that the jury is still out on the intelligibility of agent-causation. For the Libertarian, it would be preferable to have a solution to the problem of indeterminism that didn’t hinge on such controversial metaphysics.

Another worry for the agent-causal solution revolves around claim (ii): that agent-causation requires the falsity of determinism. This claim is dubious. Determinism seems compatible with the existence of agents. Why, then, would determinism rule out agent-causation? Indeed, several authors who accept the general notion agent-causation explicitly state that it is *compatible* with determinism.[[7]](#footnote-7) Absent some compelling argument, it is unclear why we should think otherwise.[[8]](#footnote-8)

To be clear, the issue is *not* necessarily that the notion of agent-causation is unintelligible, or that it is compatiblewith determinism. The issue is merely that agent-causation isn’t *obviously* an intelligible notion, nor is it *obviously* incompatible with determinism. This means that, for the Libertarian, the promise of the agent-causal solution comes with the burden of defending a mysterious notion as well as showing that this mysterious notion is incompatible with determinism. All else being equal, a solution that had the promise of the agent-causal solution, but didn’t take on these burdens, would be preferable.

2.2 Franklin’s Solution

Christopher Franklin [2011, 2018] has given a very different solution to the problem of indeterminism. He claims that indeterminism (in the right places) enhances our agency, specifically our control, by giving us *opportunities* to exercise our abilities. Suppose a pianist is stranded in the middle of the desert with no piano around for hundreds of miles. While the pianist retains the *ability* to play the piano, her environment does not afford her the *opportunity* to exercise that ability. And because of that, she doesn’t have as much control over how she spends her time as she otherwise would. Franklin says something similar holds of the thief. In the deterministic version, he retains the *ability* to refrain from stealing, but determinism denies him the *opportunity* to do so; in the indeterministic version, though, he has the ability and the opportunity, thereby giving him more control over how he behaves in the church.

As with the agent-causal solution, I think there is something to be said in favour of Franklin’s solution. First, Franklin’s solution doesn’t seem to require any mysterious notion, certainly not agent-causation, although it is consistent with such notions. Second, it may be more plausible that opportunities are incompatible with determinism.[[9]](#footnote-9) But Franklin’s solution still leaves something to be desired. The central issue is this: while it may be that determinism *precludes* the opportunity to do otherwise, it is far from clear how indeterminism *grants* the opportunity to do so. Or at the very least, if indeterminism obtains, then it is still somewhat random whether one *seizes* these new opportunities. Doesn’t that leave us with a similar problem?[[10]](#footnote-10) Just think of the thief’s case again: even if determinism *takes away* the thief’s opportunity to refrain from stealing, it isn’t immediately clear how adding indeterminism—a little bit of randomness—somehow *gives* the thief this opportunity.[[11]](#footnote-11)

 The more general takeaway is that, in order to give a fully satisfactory answer to the problem of indeterminism, we must invoke some notion that is not only *precluded* by determinism, but clearly *granted* by indeterminism.Franklin has helped us see that the freedom to do otherwise requires both the *ability* and the *opportunity* to do otherwise, and that (arguably) determinism rules out the latter. That is genuine progress. But it isn’t immediately obvious how indeterminism *grants us* the opportunity to do otherwise, which is what allows the problem of indeterminism to be effectively ‘rerun’ against Franklin’s solution.

2.3 Summing Up

Thinking through these proposed solutions suggests three desiderata for any solution to the problem of indeterminism: (1) the solution avoids extremely controversial notions; (2) the solution utilises a notion that is plausibly precluded by determinism; and (3) the solution invokes a notion that is clearly granted by indeterminism, so as to make sure the problem of indeterminism cannot be rerun. I now move to my proposed solution which I will argue meets all of these desiderata.

3. Eliminable and Ineliminable Explanations

Just as the agent-causal solution claims that indeterminism allows agents to play a certain kind of *causal* role, so my solution claims that indeterminism allows agents to play a certain kind of *explanatory* role, what I will call an *ineliminable* part of an explanation. To get there, we’ll first start with the idea of an *eliminable* part of an explanation and a simple example.

Suppose there are 1,000 dominos configured in such a way that if the nth domino falls over, it will knock over the nth+1 (assuming there is an nth+1 domino). And suppose the first domino falls over for some inscrutable reason, thereby knocking the second domino over, which knocks the third, and so on. Now ask this question: why did the 1,000th domino fall over? The best available explanation, it seems, is this:

**Explanation 1**: (i) The dominos are configured in such a way that if the nth domino falls over, then the nth+1 domino will fall over, and (ii) the first domino fell over.

This explanation has all you could ask for. It is simple and straightforward, makes the 1,000th domino’s falling over as likely as possible, and explains just about everything there is to be explained in this context. Now consider the following alternative:

**Explanation 2**: (i) The dominos are configured in such a way that if the nth domino falls over, then the nth+1 domino will fall over, and (iii) the 501st domino fell over.

This isn’t a bad explanation by any means. It’s not even a rival to **Explanation 1**—it is in some sense a *part* of **Explanation 1**. Moreover, in some cases we might prefer **Explanation 2** to **Explanation 1** for pragmatic reasons. Nevertheless, **Explanation 1** is, in an important sense, better than **Explanation 2**. After all, **Explanation 1** not only explains everything that **Explanation 2** does, but it explains lots of other things, such as why the 501st domino and all the ones before it (other than the first) fell over.

Some terminology will be helpful here. Let’s say that whether one explanation is better than anotheris determined, at least in part, by how *well* it explains the phenomena in question (its ‘predictive power’) as well as how *many* related phenomena it can explain (its ‘scope’). Whether these are the only criteria for a good explanation is an issue we will address later on. But for now, it’s sufficient to note that **Explanation 1** is better than **Explanation 2** because it not only explains everything just as well as **Explanation 2** does, but it also explains more than **Explanation 2** does—that is, **Explanation 1** has at least as much *predictive power*, and certainly a wider *scope*, than **Explanation 2**.

 Finally, consider one last explanation we could give:

**Explanation 3**: (i) The dominos are configured in such a way that if the nth domino falls over, then the nth+1 domino will fall over, (ii) the first domino fell over, and (iii) the 501st domino fell over.

This is a funny explanation. Fact (iii) seems wholly redundant. We can derive fact (iii) from (i) and (ii) (and the fact that there are at least 501 dominos). And not just that, but we can also fully *explain* fact (iii) using facts (i) and (ii). Intuitively, we can just ‘delete’ fact (iii) from the explanation without making the explanation any worse off.

 To capture this, let’s say that fact (iii) is an *eliminable* part of the explanation for why the 1000th domino fell over. More precisely, let’s say that a fact (or set of facts), *P*, is an eliminable part of the explanation of some other fact (or set of facts), *Q*, if the following conditions hold:

1. *P* is at least part of the explanation of *Q*.
2. There is some distinct, non-overlapping fact (or set of facts), *R*, such that *R* is at least part of the explanation of *Q*.
3. *P&R* is no better an explanation of *Q* than just *R*.[[12]](#footnote-12)

Intuitively, the definition is claiming that, although *P* is a part of the explanation of *Q*, adding it to another set of explanatory facts, *R*, doesn’t offer a better explanation. In the case at hand, the fact that the 501st domino fell over qualifies as an eliminable part of an explanation by this definition.

 Now we can state what constitutes an *ineliminable* part of an explanation. Most simply, an ineliminable part of the explanation of *Q* is a part of the explanation of *Q* that isn’t eliminable. More formally, *P* is an ineliminable part of the explanation of *Q* if:

1. *P* is at least part of the explanation of *Q*.
2. There is no distinct, non-overlapping fact (or set of facts), *R*, such that *P&R* is no better an explanation of *Q* than just *R*.

Intuitively, an ineliminable part of an explanation is some fact that *must* be cited if the explanation is to be as good as possible, having a maximal amount of predictive power and scope (and possibly other features). For instance, in our domino case, the fact that the first domino fell over is an ineliminable part of the explanation for why the 1,000th domino fell over. If an explanation doesn’t cite that fact, then the explanation is necessarily worse off for it.

Is there a general rule for when a fact will qualify as an ineliminable part of an explanation? The beginnings of causal chains will usually (if not always) count as ineliminable parts of explanations, as will the fundamental laws governing such chains. It is even tempting to think that *only* these kinds of facts will qualify as ineliminable parts of explanations, especially if the goodness of an explanation primarily concerns its predictive power and scope. But that’s too quick. In particular, and most relevant for our purposes, *indeterminism* in the right places can allow for facts further down the causal chain to count as ineliminable parts of an explanation.

Consider a variant on our simple domino case again. Everything is exactly the same except for one miniscule difference: if the nth domino falls over, then the nth+1 domino will fall over, *the exception being* that if the 500th domino falls over, then it is only *more likely than not* that the 501st domino will fall over. (Maybe the dominos have been setup such that the 500th domino has to fall off a table and bounce a certain way in order to hit the 501st domino.) To give it a number, let’s say that if the 500th domino falls over, there is an objective probability of 0.7 that the 501st domino will fall over. Otherwise, everything is the same.

Just as before, the first domino falls over for some inscrutable reason, knocking the second, which knocks the third, and so on until the 1,000th domino is knocked over. What explains why the 1,000th domino fell over in this case? Compare variations on our explanations again:

**Explanation 1\***: (i) The dominos are configured in such a way that if the nth domino falls over, then the nth+1 domino will fall over, with the exception of the 500th and 501st dominos, and (ii) the first domino fell over.

**Explanation 2\***: (i) The dominos are configured in such a way that if the nth domino falls over, then the nth+1 domino will fall over, with the exception of the 500th and 501st dominos, and (iii) the 501st domino fell over.

**Explanation 3\***: (i) The dominos are configured in such a way that if the nth domino falls over, then the nth+1 domino will fall over, with the exception of the 500th and 501st dominos, (ii) the first domino fell over, and (iii) the 501st domino fell over.

By adding indeterminism in the right place, fact (iii) now qualifies as an ineliminable part of the explanation for the 1,000th domino’s falling over. To see this, notice that **Explanation 3\*** is a better explanation than both **Explanation 1**\* and **Explanation 2\***. Why? Well, clearly **Explanation 1\*** and **Explanation 3\*** have the same scope*—*there isn’t any fact that one can explain but the other can’t. But **Explanation 3\*** has the advantage with regard to predictive power. After all, the likelihood of the 1,000th domino falling over is only 0.7 under **Explanation 1\*** whereas it is 1 under **Explanation 3\***.

 By comparison, **Explanation 2\*** and **Explanation 3\*** seem to make the 1,000th domino’s falling over equally likely, but **Explanation 3\*** has the resources to explain something that **Explanation 2\*** doesn’t, namely, why the 501st domino fell over. **Explanation 2\*** doesn’t even *attempt* to explain that. But **Explanation 3\*** can offer some explanation for why the 501st domino fell over: the first domino fell over, which caused the second, which caused the third, etc., until the 500th fell over, which likelycaused the 501st to fall over. It’s perhaps not a *full* explanation, but it’s better than nothing. Hence, **Explanation 3\*** is superior to **Explanation 2\*** because it has a wider scope.

More generally, there seems to be no fact or set of facts, *R*, such that (iii) in conjunction with *R* is no better an explanation than just *R*: if an explanation does not include the fact that the 501st domino fell over, it will necessarily lose out on predictive power or scope. So, it is not just beginnings of causal chains that qualify as ineliminable parts of an explanation. By adding indeterminism in the right places, facts much further down the causal chain can also qualify.

With a grip on the notion of an ineliminable part of an explanation and the relation to indeterminism, we can return to the problem of indeterminism.

4. Ineliminable Explanations and the Three Desiderata

I’m sure the reader can anticipate where we are headed. Most basically, my proposed solution to the problem of indeterminism is this: indeterminism (in the right places) allows us to play a certain explanatory role—it allows our decisions, actions, values, etc., to be *ineliminable* parts of the explanation for how the world unfolds, thereby increasing our agency in a significant way. I’ll call this the ‘explanatory solution’.

 Let’s return to the thief’s case and add a bit to the story. Suppose that the church funds a local shelter, but money is becoming quite scarce. Without a big influx in giving, the church will have to stop supporting the shelter, which means the shelter will close down. And sure enough, the big chunk of change the thief steals makes the difference: the church just barely misses the requisite funds, and so the shelter closes its doors. For simplicity, suppose the connection between the thief’s decision and the shelter’s closing is deterministic, regardless of whether the thief’s decision is brought about in a deterministic way or not.

What explains why the shelter shut down? In the fully deterministic version of the story, the thief’s decision is plainly part of the explanation, and an important part in some sense. But since determinism holds, the thief’s decision is an *eliminable* part of the explanation: in principle, one need not cite the thief’s decision at all, but can instead simply cite the initial conditions of the universe and the laws. If determinism is true, then merely citing the initial conditions of the universe and the laws will have at least as much predictive power and scope as any explanation which also cites the thief’s decision. Of course, explanations which cite the thief’s decision will often be preferable for pragmatic reasons, an issue we will return to momentarily. But for now, the important point to see is that in the deterministic version of the case, the thief’s decision adds nothing with regard to predictive power or scope.

By comparison, in the indeterministic version of the case, the thief’s decision does seem to be an ineliminable part of the explanation for why the shelter closed down. That is, if indeterminism holds (in the right places), then any explanation which didn’t cite the thief’s decision would necessarily lose out on predictive power or scope. For instance, an explanation which only cited the initial conditions and the laws would have plenty of scope, but it would miss out on some predictive power—it would only make the shelter’s closing objectively probable to a degree of 0.7. Introducing that little bit of indeterminism allows for the thief’s decision to be an ineliminable part of the explanation for the shelter’s closing.

 The more general idea is this: indeterminism (in the right places) allows our agency to play a certain explanatory role. If our universe is deterministic, then everything we ever do only plays a redundant or eliminable explanatory role: our decisions, actions, values, etc., add nothing whatsoever to the best explanation for any given event. But if indeterminism holds (in the right places), then the best explanation for certain events necessarily cites some facts about us. To put it in my grandiose way, if indeterminism holds (in the right places), then one cannot explain the history of the world without citing at least some of the facts of our agency.

So that is the explanatory solution. What should we make of it? Let’s start by considering those three desiderata proposed earlier: (1) the answer avoids extremely controversial notions; (2) the answer uses a notion that is plausibly precluded by determinism; and (3) the answer uses a notion that is clearly granted by indeterminism, so as to ensure that the problem of indeterminism cannot be rerun. I’ll take each in turn, arguing that the explanatory solution meets them all quite well. I’ll then close by considering an objection (or two) concerning the nature of explanation.

4.1 The First Desideratum: Avoiding Controversial Posits

In contrast to the agent-causal solution, the explanatory solution is consistent with, but does not require, anything like agent-causation. The explanatory solution only requires that *some* relevant feature of agency play an ineliminable explanatory role, whether that be certain agential events or the agent herself (full-stop). To return to our thief case, the explanatory solution is consistent with the thief agent-causing his decision, as that may very well imply that the thief plays an ineliminable explanatory role in the shelter’s closing down. But the explanatory solution does not require that the thief agent-cause his decision.

 That being said, the explanatory solution does seem to presuppose certain views about the nature of explanation, an issue which we will address in-depth momentarily. For now, let me simply claim that the views of explanation that the explanatory solution presupposes do not seem as controversial as the notion of agent-causation.

4.2 The Second Desideratum: Being Precluded by Determinism

The relationship between the explanatory solution and determinism is more complicated. Determinism doesn’t necessarily rule out an agent playing an ineliminable explanatory role; it only rules out *agents sufficiently similar to us* playing an ineliminable explanatory role. But far from being a problem, this turns out to be exactly the right result, or so I will argue.

 Initially it might look as if, given the truth of determinism, only the initial conditions and the laws governing those conditions will qualify as ineliminable parts of an explanation for any given event. So, it would then seem to follow that determinism rules out an agent playing an ineliminable explanatory role with regard to any given event. But both steps are questionable. It’s not too difficult to imagine cases where an agent plays an ineliminable explanatory role despite being in a deterministic world. Here are two.

 First, a case from Joseph Campbell [2007: 109]:

Suppose that [world] *W* is a determined world such that some adult person exists at every instant. . . At its ﬁrst moment of existence lived Adam, an adult person with all the knowledge, powers, and abilities necessary for moral responsibility.

Now Campbell isn’t concerned with the problem of indeterminism or ineliminable explanations. Instead, Campbell takes this case to show that it is only contingently true that no one has ever had a choice about the remote past, like the initial conditions. But we can use the case for our own purposes. Since Adam is part of the initial conditions of *W*, Adam can still play an ineliminable explanatory role despite the fact that *W* is deterministic.

 Second, we can also imagine cases where an agent is not part of the initial conditions but still might play an ineliminable explanatory role with respect to those conditions. To borrow a case from Carolina Sartorio [2015], imagine an agent—Time-Traveller Adam—in possession of a time machine that could take him to the first state of his deterministic world, but who elects to never use the machine. Time-Traveller Adam does *not* exist at the first moment of his deterministic world, although he *could have*. And this suggests that, although he is not a part of the initial conditions, facts about his agency partly *explain* the obtaining of those initial conditions. This suggests that an explanation of the world which only cited the initial conditions might not have a maximal amount of scope which, in turn, may allow for Time-Traveller Adam to play an ineliminable explanatory role, even though his world is deterministic.[[13]](#footnote-13)

 Both cases are, of course, quite controversial. But even if impossible, they raise an important point: it’s not obvious that determinism *itself* precludes an agent from playing an ineliminable explanatory role. It is only determinism *for agents like us*—agents that have never had access to the initial conditions—that determinism poses a threat for.

4.3 The Third Desideratum: Not Relocating the Problem

In contrast to Franklin’s solution, the explanatory solution does not relocate the problem of indeterminism. Recall that according to Franklin’s solution, indeterminism enhances our agency, specifically our control, by giving the agent more *opportunities* to exercise her abilities. The worry was that the problem of indeterminism can be rerun: just as it is unclear how indeterminism enhances one’s agency, so it is unclear how it enhances one’s opportunities. As it was put earlier, even if determinism rules out certain opportunities, how is that introducing a certain kind of *randomness* gives the agent those opportunities back?

 The explanatory solution avoids this issue because it is fairly clear how indeterminism makes way for ineliminable explanations. Think about our domino cases again. Not only does determinism preclude the 501st domino from playing an ineliminable explanatory role, but indeterminism—a certain kind of randomness—allows it to play such a role. That’s because randomness allows for facts further down the causal chain to contribute to an explanation’s predictive power. Therefore, it is not only plausible *that* determinism would rule out our playing an ineliminable explanatory role, but it is also clear *how* indeterminism would let us play such a role. If so, then the problem of indeterminism cannot be rerun.

4.4 Summing Up

So, it seems as if the explanatory solution meets the three desiderata considered earlier, and in fairly compelling ways. We’ll close by considering an objection (or two) unique to the explanatory solution.

5. An Objection (or Two)

In defining the notions of an eliminable and ineliminable part of an explanation, I have focused exclusively on the criteria of predictive power and scope, and primarily because these two criteria seem to be the most universally agreed upon. But surely there are other criteria for judging the goodness of an explanation. Once we articulate these other criteria, though, can we really be so sure that determinism would preclude facts about our agency from playing an ineliminable explanatory role?

 Here’s one reason to think not. Suppose we want an explanation for why the United States has done so poorly with regard to the Covid-19 pandemic. A natural explanation would cite the failings of certain people and agencies, wide-spread cultural values, the proliferation of misinformation, and so forth. That is, the natural explanation would cite various people’s actions, decisions, values, etc., among other things. By comparison, it would be completely *unnatural* to merely cite the initial conditions of the universe and the laws of nature, even should our world be deterministic. This seems to show that predictive power and scope cannot be the *sole* set of criteria in evaluating an explanation and that, contrary to my comments above, explanations which cite facts about an agent are sometimes better than explanations which merely cite the initial conditions and laws, even if determinism is true.[[14]](#footnote-14)

 This is an incredibly informative objection and thinking through it opens up promising new lines of inquiry. However, there are (at least) two ways of making the objection more precise. In what remains, I’ll explicate these two different versions of the objection and argue that there are viable and interesting responses to both.

5.1 The First Version: Pragmatic Concerns and Explanation

The first and most straightforward way to understand this objection involves an appeal to *pragmatist* viewsof explanation. When we ask for an explanation, we don’t just want a correct answer; we want a correct answer that *fits with our interests*. And since our interests vary from context to context, several authors have argued that whether one explanation is better than another will depend on the context.[[15]](#footnote-15) To relate this back to the cases at hand: if our interest is to prevent future outbreaks of Covid-19 (or similar diseases) in the United States, it is far more helpful to be told about the activities of various people and agencies, cultural values, the spread of misinformation, etc., than to be told about the initial conditions and the laws. Likewise, if our interest is to prevent further shelters from closing down, it is helpful to cite the fact that the thief stole from the church. More generally, once we admit that *pragmatic* concerns partly determine whether one explanation is objectively better than another, it seems perfectly possible for facts about an agent to play an *ineliminable* explanatory role even in deterministic settings.

 In response, it seems to me that those who accept the explanatory solution ought to reject such pragmatist views of explanation. Admittedly, this is a dialectical cost of the explanatory solution. One might even wonder whether the explanatory solution now meets the first desideratum outlined above, namely, that it avoids controversial posits (or views). But it seems to me that this admission isn’t *too* costly, as there are plenty of viable views of explanation that respect the role of pragmatic concerns without admitting that such concerns partly determine whether one explanation is *objectively* better than another. For instance, one of the most influential examples of such a view comes from Peter Railton [1978, 1981] and Wesley Salmon [1989]. Railton starts by distinguishing between an *ideal explanatory text* and *explanatory information* [1978: 247]:

An ideal text for the explanation of the outcome of a causal process would look something like this: an inter-connected series of law-based accounts of all the nodes and links in the causal network culminating in the explanandum, complete with a fully detailed description of the causal mechanisms involved and theoretical derivations of all the covering laws involved. . . It would be the whole story concerning why the explanandum occurred, relative to a correct theory of the lawful dependencies of the world. Such an ideal causal [deductive-nomological] text would be infinite if time were without beginning or infinitely divisible, and plainly there is no question of ever setting such an ideal text down on paper… But it is clear that a whole range of less-than-ideal proffered explanations could more or less successfully convey information about such an ideal text and so be more or less successful explanations, even if not in [a deductive-nomological] form.

Most basically, the ideal explanatory text is the ‘complete’ or ‘full’ explanation for a given event, whereas explanatory information concerns certain portions of the ideal explanatory text, making it a ‘more or less’ successful explanation.

 Wesley Salmon [1989] has suggested that this distinction can help reconcile pragmatist and non-pragmatist (e.g. ‘objectivist’) views of explanation. He writes [1989: 161, emphasis in text]:

One useful way to think about this conflict, I believe, is to regard the objectivists… as focusing on the ideal explanatory text… The ideal explanatory text contains all of the objective aspects of the explanation; it is not affected by pragmatic considerations… When we turn to explanatory information, pragmatic considerations immediately loom large. What part of the ideal explanatory text should we try to illuminate? Whatever is *salient* in the context under consideration. That depends upon the interests and the background knowledge of whoever seeks the explanation.

With Railton’s and Salmon’s comments in mind, an interesting version of the explanatory solution emerges: that indeterminism is only required for facts about our agency to play an ineliminable explanatory role with respect to the *ideal explanatory text*, not with respect to the *salient explanatory information*. To use our concrete cases, when asking why the United States has done so poorly in handling the Covid-19 pandemic, there are strong pragmatic reasons to mention facts about certain agents. That is, the salient explanatory information cites facts about the actions and omissions of various agents. If so, then such facts may very well occupy an ineliminable explanatory role with regard to the salient explanatory information. Nevertheless, if determinism is true, something is still lost: those same facts do not play an ineliminable explanatory role with respect to the ideal explanatory text. Similarly, with the thief and the shelter: his decision to steal might be an important part of the salient explanatory information, but it is an eliminable part of the ideal explanatory text, should determinism hold.

 Admittedly, Railton’s and Salmon’s comments are controversial, and a full defence of their views is well beyond the scope of this paper.[[16]](#footnote-16) Moreover, the fact that the proponent of the explanatory solution must accept some such view does present a dialectical cost for the explanatory solution. But in so far as views like Railton’s and Salmon’s are taken quite seriously in the literature, the cost doesn’t seem too large. At the very least, for those Libertarians who are squeamish about the notion of agent-causation, views like Railton’s and Salmon’s are more pleasant.

5.2 The Second Version: Levels of Explanation

There is at least one more way of understanding the objection, one which does not necessarily appeal to pragmatist views of explanation. Instead, it might be thought that explaining certain macro-events in the world—events such as the U.S. doing poorly with regard to Covid-19 or the shelter closing down—by citing micro-events and the laws governing such events involves a mismatch in *levels of description*. To see this, compare the following explanations, modified from Colin Klein [2014: 209, emphasis in text]:

1. (a) The square peg failed to pass through the hole because its cross-section was longer than the diameter of the hole.

(b) The square peg failed to pass through the hole because [*extremely long description of atomic movements*].

1. (a) John got a ticket because he was driving over 60mph in a 60mph zone.

(b) John got a ticket because he was driving exactly 73mph in a 60mph zone.

1. (a) Socrates died because he drank hemlock.

(b) Socrates died because he guzzled hemlock.

1. (a) Arlene ran because she was scared of the bear.

(b) Arlene ran because [*complicated neural description*].[[17]](#footnote-17)

Intuitively, the (a) sentences are better explanations than the (b) sentences. And that need not be for solely pragmatic reasons, but instead for *structural* reasons. In explaining why the square peg failed to pass through the hole, the relevant structure is the macro-level property involving the cross-section of the peg, not the micro-level properties involving the atomic movements of the parts of the peg. Similarly for the other examples: the first sentence constitutes a better explanation because it identifies the relevant higher-level properties. More generally, we might insist that a criterion for the goodness of an explanation is that the individuals and properties picked out by the explanation are of the appropriate level—that the levels (or levels of descriptions) involved in the explanans and explanandum match.

 If so, then in explaining why the U.S. has done poorly with respect to the pandemic, or why the shelter closed down, we ought not cite merely the initial conditions and the laws. To do so would involve a ‘mismatch’ in levels, since the initial conditions (and the laws) involve micro-events. Instead, an explanation which cited agents and the like would seem to be of the appropriate level, thereby making room for facts about agency to play an ineliminable explanatory role, even should determinism obtain, and even should we reject pragmatist conceptions of explanation.

 This construal of the objection, as with the last, would require a significant amount of space to fully address, but I should like to make two points. The first is simply that this way of thinking about explanation is controversial,[[18]](#footnote-18) and so rejecting it needn’t be *too* costly for the proponent of the explanatory solution. The second point is more substantive. If the proponent of the explanatory solution accepts this way of thinking about explanation, then she can grant that *microphysical* determinism need not detract from our agency, while insisting that *macrophysical* or *psychological* determinism would. That is, it isn’t any old determinism that eliminates our playing an ineliminable explanatory role; it is only determinism *at the right level* that does.

 Interestingly, something like this view has recently been defended by Christian List [2019]. List defends a view he calls ‘Compatibilist Libertarianism’, according to which the freedom to do otherwise would be ruled out by determinism at the macrophysical or psychological level, but not of the microphysical. As List puts it [2019: 92, emphasis in text]:

 The coarse-grained nature of the psychological level opens up the possibility that the state of the world as specified at that level may be consistent with more than one sequence of events, even if there is [micro-]physical determinism. In particular, a psychological-level state is consistent with every sequence of events that is supported by one of its possible physical realizations. . . As long as some of the possible higher-level sequences of events correspond to different courses of action, it follows that more than one course of action is *possible for the agent*. In short, the totality of facts at the psychological level up to a given time may leave more than one future course of action open for the agent. And so, there may be agential indeterminism, even in the presence of [micro-]physical determinism.

I must admit, I have reservations about List’s view. But I count it a virtue of the explanatory solution that, given certain views of explanation, it fits with and possibly even illuminates a novel version of Libertarianism. Perhaps it is not just indeterminism *in the right places* that is significant for agency, but indeterminism *at the right level*. If so, then thinking through the various conceptions of explanation, in conjunction with the explanatory solution, promises to be a fruitful line of inquiry.

6. Concluding Remarks

What does indeterminism have to offer agency? The explanatory solution answers: indeterminism, in the right places (and perhaps the right level), means that one cannot explain the history of the world in a maximally satisfactory way without citing facts about our agency. I’ve argued that the explanatory solution meets the three desiderata outline above quite well, making it an attractive solution. But there’s at least one more feature of the explanatory solution worth pointing out: whereas other solutions typically focus on the relationship between the agent and her *actions*, the explanatory solution, as articulated here, focuses on the relationship between the agent and her *effects*.[[19]](#footnote-19) In this way, the explanatory solution admits that indeterminism doesn’t increase our agency *itself*; rather, indeterminism increases the *significance* of our agency. Perhaps that’s what the Libertarian should have said all along. After all, the truth or falsity of determinism would seem directly relevant not to the *kinds* of individuals or properties there are, but rather the *connection between* individuals or properties. If so, then Libertarians have been looking for increases to our agency in all the wrong places.[[20]](#footnote-20)

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1. See Hobart [1934], van Inwagen [1983: ch. 4], and Mele [2006] for the traditional ‘problem of luck’ formulation. See Franklin [2011, 2018: ch. 6] for the ‘problem of enhanced control’ formulation. See List [2019: ch. 4] for a slightly distinct formulation focused on the notions of ‘attributability’ and authorship’. [↑](#footnote-ref-1)
2. See O’Connor [2000, 2005, 2009] and Pereboom [2001, 2014] among others. [↑](#footnote-ref-2)
3. See Franklin [2018: ch. 6]. [↑](#footnote-ref-3)
4. See Reid [1778/1969], Chisholm [1966], Clarke [1993, 2003], O’Connor [2000, 2005, 2009], and Pereboom [2001, 2014]. [↑](#footnote-ref-4)
5. Classic, albeit distinct, formulations of this worry can be found in Broad [1952] and Davidson [1971]. [↑](#footnote-ref-5)
6. O’Connor [2000], Clarke [2003], and Pereboom [2004] are particularly illuminating. [↑](#footnote-ref-6)
7. See Markosian [1999, 2012], Clarke [2003], and Nelkin [2011]. [↑](#footnote-ref-7)
8. Tim O’Connor [2003, 2009] aims to give such an argument. [↑](#footnote-ref-8)
9. See Franklin [2018: 71-2]. [↑](#footnote-ref-9)
10. Thank you to an anonymous referee at the *Australasian Journal of Philosophy* for helping me get clear on this issue. [↑](#footnote-ref-10)
11. Although, see Franklin [2018: ch. 3] for further details. [↑](#footnote-ref-11)
12. This definition might have some counterintuitive implications for cases of overdetermination as well as causal loops, but I’ll set such cases aside. [↑](#footnote-ref-12)
13. The case is quite tricky, though, because it seems to involve an explanatory loop: although Adam’s decision to not use the time machine explains the initial conditions, those very same initial conditions seem to explain (at least ancestrally) his decision, given the truth of determinism. It might seem, then, that an explanation which cited just the initial conditions would have just as much predictive power and scope as one which instead cited the state of the world at the time of Adam’s decision, which would imply that both the initial conditions and Adam’s decision are *eliminable*! I’ll leave this complication aside. [↑](#footnote-ref-13)
14. Thank you to two anonymous referees at the *Australasian Journal of Philosophy* for raising this objection. [↑](#footnote-ref-14)
15. I have authors such as Rescher [1970], van Fraassen [1980], and (arguably) Woodward [2003] in mind. [↑](#footnote-ref-15)
16. Railton’s and Salmon’s views have spawned a fairly large literature. For a recent discussion, see Bradley [2020]. [↑](#footnote-ref-16)
17. Klein [2014], in turn, modified these examples from Hilary Putnam [1975]. [↑](#footnote-ref-17)
18. Again, see Bradley [2020]. [↑](#footnote-ref-18)
19. Thank you to an anonymous referee at the *Australasian Journal of Philosophy* for helping me see this. [↑](#footnote-ref-19)
20. Thank you to Taylor Cyr, Luca Ferrero, John Martin Fischer, Adam Harmer, Michael Nelson, Erich Reck, and Carolina Sartorio for comments on previous drafts. A special thank you to the anonymous referees, Associate Editor, and Editor at the *Australasian Journal of Philosophy* for insightful comments and suggestions. [↑](#footnote-ref-20)