

Backwards Causation in Our World

Abstract:

Whereas many philosophers take backwards causation to be impossible, the few who do accept it either take it to be absent from the actual world or else confined to theoretical physics. Here, however, I argue that backwards causation is not only actual, but common, though occurring in the context of our social institutions. After juxtaposing my cases with a few others in the literature and arguing that we should take seriously the reality of causal cases in these contexts, I consider several objections. These objections involve whether the cases should be reinterpreted, whether they are properly within the institution, whether they involve necessitation or else Cambridge changes, and whether and how they involve changing the past. I end by suggesting that it is a virtue of our institutions that they allow backwards causation, that this is a kind of technology that they are often built to incorporate.

0. Introduction

Causation is typically taken to be a two-place, irreflexive, asymmetric, and transitive relation of metaphysical dependence between two events, where the cause temporally precedes the effect. Though this is the standard understanding of causation today, of course in the literature nearly every aspect of this conception has been challenged. (Is it *really* a relation between events, rather than facts? Are we *sure* that it is transitive?) What is less frequently challenged, however, is the claim that causes precede their effects.

For a case of *backwards* causation, then, the effect temporally precedes the cause, and the debate over backwards causation tends to concern whether it is possible or even conceptually coherent. The notion that causes precede their effects was part of the definition of causation for Hume (1748/2000),¹ and it was among the paradigmatic synthetic a priori truths for Kant (1783/2004). More recently, Flew (1954, 1956, 1956-7), Black (1956), Mellor (1998), and Ben-Yami (2007, 2010) have argued against the possibility of backwards causation. Meanwhile, while there are proponents who argue that backwards causation is at least *possible* (see Dummett [1954, 1964], Tooley [1997], Roache [2009], and Garrett [2014, 2015]), no cases are found.

If there are any actual cases, we are typically told that they will be in the far-flung realm of theoretical physics. There, perhaps tachyons travelling faster than light can backwardly cause (Faye 2018), or perhaps positrons are just electrons that move backwards through time (Feynman 1949). There may be other models within quantum mechanics that permits it besides (Dowe 1997; Corry 2015). What seems clear from these authors is that even if backwards causation is possible, we are not likely to see it on our way to the grocery store.

Given the focus in the causation literature on the physical causation of billiard balls and the like, I think this bewilderment over the possibility of backwards causation is unsurprising. It is hard to imagine medium-sized physical objects actually moving in reverse. And given how unfamiliar and unintuitive the realm of theoretical physics can be, it is also unsurprising that we would rest our hopes of backwards causation there. However, I do not think that we must look so far for possible cases of

¹ Understood as an antirealist about causation, there is no great surprise that causation cannot be backwards. Technically, the relation of causation is never actually instantiated; instead, it is our way of labelling occurrences of constant conjunction, with the cause as the first conjunct.

backwards causation. In the world that we inhabit—the social world—apparent cases of backwards causation are all around us.

Here, I want to highlight and make the case for the ubiquity of backwards causation in the context of our social institutions. In the first section, I will present several apparent cases of backwards causation and situate them within the social world. After considering what little precedents exists for discussing these kinds of cases, I will discuss what we should say to ameliorate the sense that there is something off about them given that they arise within institutions of our own creation. In the second section, I will consider a series of other objections to the cases. These appeal to how the cases are interpreted, the features of causation, the kinds of properties at issue, and the commitments these cases appear to involve. I conclude by affirming that these are genuine cases of backwards causation and by briefly suggesting that this is a feature of our social reality to be celebrated, not a bug to be explained away.

1. The Cases

Consider the following three cases:

Case 1: Retroactive Enrollment

Kevin made a mistake in graduate school. One semester, say in year X, he registered for PHIL755 rather than PHIL756. Both classes are open-ended dissertation writing classes that one registers in as a formality, but he had already ‘taken’ PHIL755, and PHIL756 was next in the sequence. The mistake was not discovered until a year later (X+1) when it was time to make sure his affairs were in order to graduate. After reviewing his transcript, recognizing his error, and becoming hysterical, he shared his mistake with the department administrator. Graciously, she assumed the bureaucratic headache of fixing it. Calls were made, emails exchanged, and eventually Kevin was *retroactively* enrolled in the course. By the end of the ordeal, actions taken by Kevin’s administrator in year X+1 caused him to have technically been registered for and taken PHIL756 in year X.

Case 2: Forced Forfeit

The Tigers are a wrestling team that competes for and wins the National Championship in year X. Unfortunately, however, they cheated by using rigged weight scales. When this is uncovered in year X+1, the league commissioner decides to strip the team of their title in the wake of the scandal. It is written down that the team forfeited their last match, and the title went to their final opponents. By the end of the ordeal, the announcement of the commissioner in year X+1 causes the team to forfeit the match that occurred in year X.

Case 3: Annulment

Billy and Suzy decide that after being friends for many years they must be meant for each other, so they get married (say, on day X). Unfortunately, they quickly realize that they should *not* be married; they’re both just too competitive. As it happens, they are also both Catholic, and both hope to remarry someone else someday. Luckily, they petition the church successfully and are granted an annulment of their marriage (on day X+100). In the eyes of God, the marriage never occurred. So, actions of the diocese on day X+100 cause the erasure of the marriage of Billy and Suzy on day X.

Now, before beginning to discuss these cases and what they suggest in earnest, it is worthwhile to take a second to, well, beg the reader not to get off the boat too soon. I think these cases present genuine

instances of backwards causation, but it would not be an uncommon reaction for a reader to balk strongly at the suggestion. It is not lost on me that there is something a little too ‘cute’ about the cases. There is a strong temptation to think that they can be immediately explained away. For all that I say below, perhaps they can be. But what I will do here to get ahead of this strong reaction is to point out that there may be something helpful in this exercise. I will not implore the reader to suspend judgment until the case has been made and defended—I doubt this is possible—but I think it survives a surprising number of immediate worries. And responding to each of worries, as we will see, deepens our understanding of what goes on in these cases. So, if nothing else, this justifies looking beyond knee-jerk reactions.

Focusing on these cases, then, the first thing to notice is that there is nothing special about them. They are common in our social lives, even banal.² They are not miraculous natural occurrences that only the brightest physicists could discover; they occur as a matter of routine. Thus, if they do involve backwards causation, then backwards causation will turn out to be not merely possible, but actual, though occurring in the context of social institutions.

In the literature, the rough idea of these kinds of cases is not without precedents. Peijnenburg (2006), for example, offers a view of acting in ways that retroactively set features of our past conduct. The character with which we engaged in some particular action can depend, she maintains, upon our subsequent behavior. For example, whether an act genuinely reveals your bravery depends upon the pattern of your conduct after the act. This may allow us to have some say about our past. However, Peijnenburg’s understanding of her cases is closer to changing the *meaning* or maybe the nature of concrete events in the past, not with changing which events in fact occurred.³

In contrast, Torrengo (2018) has recently also recognized how social institutions create the space for what he calls ‘retroactive enactments’, but where these do involve changing the events that occurred in the past. Torrengo himself is primarily concerned with how their possibility creates a problem to be handled (in his case, by accepting a version of the B-theory of time) as opposed to recognizing it as something to be explored. Given this, he fails to appreciate the position of these cases in the literature on backwards causation, their ubiquity, the various other concerns they raise, and indeed the advantage of them to be highlighted below. What Torrengo captures well, though, is the reliance of cases like these on institutional reality.

Confronting the above cases, this reliance on social institutions is apparent, and it admittedly does make it feel as if something shifty is going on. Who’s registered when and how can change and what it counts for is so malleable, we might think, that it is somehow illegitimate to consider it on a par with the kind of causation that we are talking about when we are talking about billiard balls. After all, we invented these notions and change them around at our whim. These cases feel invented because they are invented; they are a product of institutions, conventions, and practices that we developed. The question, though, is whether the mere fact that they involve institutions we created undermines their claims to causation. And I think it does not.

Start with idea that many (with roots in Anscombe [1958] and Searle [1995]) have come to accept so-called institutional facts, or facts that involve institutions or require certain institutional elements to obtain. Now, there are many questions about the nature of institutional facts: How they are related to non-institutional facts? Or how about to brute facts? To what extent do they depend on our minds? How are they established? There is no question, however, that an acceptance of these facts

² This is against Dummett (1964:358) and in agreement with Roache (2015) in maintaining that there is nothing peculiar about being agents who take ourselves to be able to affect the past. However, important for Dummett and Roach is that they are considering agents who take themselves to be capable of performing actions that cause the past to be *as it was already*, whereas the cases here involve changing the past. This introduces its own problems, which will be discussed below.

³ See van Putten (2006) for criticism of the piece along these lines.

has been institutionalized. If we grant this much, we should also grant that there can be institutional events, where these may be events that occur in the context of institutions, or the event-tokens that are the subject of institutional facts.

Once we have institutional events, we can also easily recognize cases of uncontroversial causation between institutional events. Your pawn-movement caused my bishop's retreat. Tara's registering for the class caused the professor to email her the syllabus. These cases of apparent causation within institutions easily satisfy whatever test we arrange to judge causation. My bishop's retreat counterfactually depends on your pawn-movement, say, and Tara's registering for the class raises the probability of the professor's emailing her the syllabus. Though these are in the context of institutions, they are paradigmatic instances of causation. Our attributions of causation in these cases are not metaphoric, but literal, and it would seem to be a kind of scientism to claim that these are not instances of *real* causation.

(Our paradigmatic case of real causation is the causation between billiard balls, but we can notice that of course billiard balls themselves are institutional objects. Moreover, there is arguably even backwards causation in the context of billiards! Whereas Dummett (1954:29-30) calls on us too appreciate how complex it would be to try to model shots of billiard balls in reverse, we would not even try to appeal to complex versions of those laws when explaining what happens when we scratch. When that happens, the rules dictate that we bring the condition of a player *back to an earlier state*. My scratching sets me back causally, undoing my earlier successful shot.⁴⁾

So, if we are willing to take causation in the context of institutional reality seriously, then we are in a position to model the apparent backward causation in these cases. Take Retroactive Enrollment. Originally, in year X, there is an event (a) 'Kevin's taking PHIL755'. Taking a class is an extended event with which most of us are familiar. Though this class has no classroom or set assignments, it does occur over a span of time and is located (such as it can be) at the university.⁵ Though this is an event that raises certain questions, it is also a familiar event, one we are likely to countenance within our social reality.

In year X+1, we saw that there is a second event (b) 'The administrator's phone call'. The suggestion is that this event is a cause of a third event, (c) 'Kevin's taking PHIL756' which occurs back in year X. Once the administrator has made the phone call, there is no more event (a) of 'Kevin's taking PHIL755' in year X.

⁴ The point is meant to drive home this idea of the ubiquity of these cases and how they may even affect our core understanding of causation, but I do not deny that there may be other ways to interpret this particular case. I think it is well-understood as a setback, where setbacks are characterized causally in terms of a player's being made to inhabit an *earlier* position. However, it may be interpreted as simply *the next* state to occur given the one before it, where that state is worse-off for the player as a punishment. That said, there may yet be even more radical interpretations. Perhaps causation in the context of games like billiards is a candidate for causation understood as fundamentally teleological (*à la* Hawthorne & Nolan 2006). On that interpretation, each move is causally understood in terms of how it advances the player towards a goal (winning the game). In that case, the result of a scratch would be viewed also as a kind of backwards causation, but where this is interpreted as being made *farther* from the goal at hand.

⁵ It is an interesting question precisely where this event occurs or what objects instantiate it. We cannot address this sufficiently here, but I refer readers to a recent exchange on an adjacent discussion on the materiality of establishments (Korman 2020; Hindriks 2020). Given that exchange, there is a fleeting thought that if Korman is right, and establishments like universities as objects are abstract, then perhaps some events involving them are abstract as well. Perhaps Kevin's taking PHIL755 or PHIL756 are events without embodiments, and perhaps it would be more plausible to readers that backwards causation can occur with physical events in the present causing abstract past events. At least, such causation would not involve moving around physical *stuff* in the past. I float this as an idea, but I will not pursue it further, since I am inclined to think that establishments are material, and Kevin's taking PHIL756 occurs where he is over the year, though it may be ontically indeterminate which segment of his conduct over that year constitutes his participation in that class.

Now, (c) would not have occurred if (b) had not occurred. (b) also raises the probability of (c)'s occurrence. (Assume it is no sure thing that whoever is on the other end of the phone will augment the computer system, but the administrator's phone call makes it highly likely.) When (b) is spelled out suitably, it will also provide what seems to be a satisfying, diachronic explanation for (c). In short, (b) will count as a cause of (c) on many accounts of causation widely discussed, though it will be backwards in time.

More specific events could be pointed to in the other cases to make much the same point. And more specific accounts of causation could be drawn out to deliver this verdict. But the point seems clear. Or, rather, I suspect that the source of a reader's skepticism is not to be found in the account of causation chosen or even how the events in these cases are individuated. Given that, I want to move on to what I take to be likely objections.

2. Objections

It would be easy enough to dismiss these cases for those not willing to take institutional reality seriously. Given the recent rise of social ontology, however, hopefully these cases (and what they purport to show) cannot be so easily dismissed. Still, even granting the reality of institutional events, one is liable to think that there is a quick explanation of how the cases so described do not depict backwards causation. Below are a number of such attempted explanations or challenges with responses.

2.1. The cases can and should be reinterpreted to not involve backwards causation.

First, someone might argue against how I have interpreted the cases. In each case, I say that an event at a time has caused the occurrence of another event in the past. However, given how these institutions are all a matter of how we treat things, we may attempt to reinterpret the cases as follows: Events unfold in a certain way; then, at a later time, we decide to act from then on as if they had unfolded a different way. In the first case, for instance, I have suggested that the actions of the administrator caused Kevin to have been registered for a different class. Instead, we might say that the actions of the administrator make it such that from that day forward we consider Kevin to have been registered for a different class than the one he was in fact registered for in the past. And similar re-interpretations may be given for the other cases.

It would not be hard to reinterpret Retroactive Enrollment in this way, especially if we assumed that the rules of the university were quite strict. Sure, perhaps the administrator *can* pull some strings to massage Kevin's transcript to look right for graduation, and perhaps she should do this both for Kevin and in the interest of the university. But we may nevertheless maintain that it is illegitimate, that Kevin did not in fact take PHIL756, that he never took it, especially not back in year X. We may think that taking institutional reality seriously means being willing to not just throw up our hands and say that it's all made up; it means acknowledging that Kevin really did not take PHIL576 in year X as per the university rules.

In response, I will just grant that the case certainly can be reinterpreted that way if this happens to be the way that this university in particular actually works. But does it *have* to work that way? It seems just as likely that the university has, by its own rules, given authority and discretion to its

department administrators regarding enrollment, both past and present.⁶ Perhaps these mistakes are so common and pedagogically inconsequential that the university's rules explicitly allow for being de-enrolled and re-enrolled in these meaningless dissertation-writing classes at any point in the student's time in graduate school. In any case, it is at least possible that the university works this way, thus blocking the problematic reinterpretation.

This kind of reinterpretation is even more apparent in the case of Annulment. Although I have spelled out the case as one where a couple that is actually made to never have been married, it has been pointed out to me quite fairly that this is not how annulment is properly understood in the Catholic faith. Instead, we may say that marriages can only be annulled when there are grounds to say that the marriage was never valid to begin with (perhaps because consent was not appropriately given). We uncover that there was no valid marriage; we do not *make* the marriage to be invalid.

If this is the right interpretation of Annulments in Catholicism, then I agree that this will not be a case of backwards causation. But this is not to say that we cannot have an institutional practice very similar to annulment that is interpreted in my way. We could imagine a society where re-marriages are illegal, marriages can end in either divorces or annulments, and the difference between them is as follows: whereas divorces make it such that couples *are no longer* married, annulments make it such that couples *never were* married. So, that there are clever ways of reinterpreting my cases is insufficient to show that institutional reality is incapable of fostering backwards causation. I think that it certainly is, and in the conclusion I will mention a reason for why we should want it to be.

To be clear here, though, none of this is to say that our cases can be represented as either having backwards causation or not, where the apparent backwards causation is just a trivial feature of how we are representing the cases. These institutional practices *really do*, as a matter of institutional reality, work one way or the other. Of course, how we set up this institutional reality will depend on how we choose to represent the situation. After all, our institutions largely involve systems of representation. So, the fact that the cases only have backwards causation because we are representing them that way does not invalidate the cases; it vindicates them. If we have set up the institution to allow for this, then saying that this is not *really* backwards causation but a feature of how we are representing things is to fail to sufficiently take institutional reality seriously.

2.2. *These cases do not feature backwards causation within an institution.*

A second objection begins with the sense that the administrator in Retroactive Enrollment is somehow *outside* of the system in question. Perhaps she in some way determines facts about the system, and she certainly works for the university, but we may think that events involving her conduct do not quite occur at the level of social reality relevant. Kevin's taking PHIL575 might partially cause his taking PHIL576, and his taking PHIL576 might partially cause his being awarded his diploma, but actions of the administrator do not seem to directly bear on the causal workings of the degree progression. We could make similar claims about the conduct of the league commissioner from Forced Forfeit or the diocese in Annulment. If the actions of these individuals do not have the proper institutional status, then we might not be talking about causation between institutional events, let alone backwards causation. Instead, we could perhaps say that facts about the institution depend on are or grounded facts about what these individuals do, but where this is some non-causal determination relation.

Given the cases above, this concern does seem warranted. However, a number of responses are available. Starting with the most concessive such response, I will just say that if these cases do not

⁶ There are certainly procedures we are all aware of concerning how a grade can be changed after the fact, and the conditions licensing them are as codified as possible and institutionally real.

convince, then one is discussed below that lacks this feature of agents acting from outside of the system in question. As we will see, the case of Re-Do Checkers involves (or could involve) backwards causation fully within the game at hand. Though I do like the above cases, there are in principle other cases of apparent backwards causation within institutions that suffice.

To be less concessive, though, I think that the cases above do suffice to show something significant even if we do not quite accept that what is being instantiated is backwards causation. If not backwards causation, we are still talking about an event right now in some way influencing an event in an institution's past. We would be talking about backwards determination, where this is still a two-place, irreflexive, asymmetric, and perhaps even transitive relation of metaphysical dependence between two events. Well, that still sounds important to me. All of the reasons that are typically given against the possibility of backwards causation might be thought present for cases of backwards metaphysical dependence as well, even if it is just shy of causation proper, so it is still worth demonstrating that such backwards dependence is instantiated in these cases.

I am not sure, however, why the metaphysical dependence in these cases would not count as causation. The changes in the past that occur still counterfactually depend on the actions of these agents in the present, for instance. So, I submit that the burden is on opponents to show how these cases will not count as causation on a separately motivated account of causation. And short of accepting a realist conception of causation that ties causation to something like energy transmission,⁷ for example, I am doubtful that there are plausible accounts that will deliver these results.

Further, and finally on this point, I would also challenge the characterization of the actions of these agents as not properly within the systems in question. Part of our answer to the last objection involved recognizing how the administrator may need to be institutionally empowered to make these kinds of decisions. Part of the rules of the institution that defines the degree make room for agents like the administrator to do things like switch enrollment around for good reason. Similarly, only the league commissioner, in accordance with league guidelines, is empowered to strip a team of a title. So, while there is something exogenous about the agents in the cases above in that they represent interventions⁸ in the order of things, they are empowered by and a part of the system that they affect.

2.3. Causes do not necessitate effects, but these events do involve necessitation.

Someone may object that the relation between the events mentioned in these cases cannot be causation, because these later events seem to necessitate the earlier events, and causes do not necessitate their effects. Following Hume's dictum, we may think that these events cannot genuinely be distinct if one entails the other. If the administrator changes a transcript today, then it follows that I took that class last year. If the commissioner made the announcement of the verdict today, then the team forfeited in the past. These events that follow do so with such certainty that it may seem that they *must* follow – that they are in some way entailed by the current events.

To respond to this concern, I suggest that we first focus on *other* events in the vicinity and notice that they are not similarly necessitating. The event we focused on for Retroactive Enrollment was the administrator's phone call, not their changing the transcript, for instance. In Forced Forfeit, we could focus on the event of the discovery of the wrestling team's cheating. The team certainly

⁷ Note that someone who goes in for causation in the context of institutions is likely to separately reject an account of causation in these terms, given how it in a sense prioritizes physical causation. So, failing separate arguments for why causation is physical and does not actually occur within institutions, opponents will need an account of causation that proponents of institutional causation can accept to demonstrate why backwards causation is impossible by their lights.

⁸ That they can be framed as interventions is yet another reason to think that the language of causation is appropriate here.

wouldn't have had to forfeit if not for the discovery, so the forfeit counterfactually depends on the discovery. The discovery also no doubt raises the probability of the forfeiting.⁹ So, on a number of tests for causation, we are led to say that the discovery is a cause of the forfeiting. But the discovery does not necessitate the forfeiting. Even if we remain worried about the particular cases above, then, this worry will not hold for many nearby instances of backwards causation.

Still, what of the commissioner's announcement? The most natural story for the discovery's counting as a cause of the team's forfeiting is that it causes the commissioner's announcement, the announcement seems to cause the forfeiting, and so the discovery counts as causing the forfeiting by the transitivity of causation. This is no direct argument for causation as the relation between the announcement and the forfeiting, but it is a story that hangs together.

We can acknowledge, though that the announcement does *seem* to necessitate the forfeiting, and this is concerning. Frankly, I am not entirely sure how we should answer this – whether we should take them to necessitate these events while still causing them or not. Luckily, there is a way of discharging our burden in these cases, and it is by seeing how similar they are to the odd cases of genuinely proximal or even simultaneous causation.

If I push a ball five feet and it moves five feet, then this is a paradigm instance of causation, but I cannot push a ball five feet *without* its moving five feet. That effect is necessitated. Of course, my *effort* does not necessitate the ball's motion, and my pushing (understood only as the exertion of effort) also might not necessitate the motion, but that was not the event specified. The event specified was my pushing the ball five feet, and that seems like an event with effects. There are sure to be moves to make here or bullets to bite, but the larger point is that the cases of backwards causes and effects above look closely related to each other in just the same way as proximate or simultaneous causes/effects. I grant that it is hard to think of these cases of backwards causation as ones where the causes are 'simultaneously with' or even proximate to their effects. After all, the priest annulled a marriage from many months ago! Nevertheless, these effects in the past are *causally* proximate with their causes. They are the very next thing caused, and so it is no surprise that their causation seems worryingly guaranteed.

2.4. The 'changes' made to the past are not genuine changes, only Cambridge changes.

Another objection to consider is that the events of the present are not genuinely causing *events* of the past; instead, things in the present are making 'Cambridge' changes to the past (*à la* Geach 1969). Suppose I may make a marvelous cake at t_1 . Then later, at t_2 , we decide it was the best cake ever made. In the parlance of the literature, what we have done is not actually changed the past; we have simply made 'Cambridge changes', bestowing the Cambridge property of being labelled the best cake ever made to my cake, but in no material way changing the cake. This is still plenty mysterious, but we will not say that it is a matter of backwards causation. So, the opponent may say that the commissioner is making a Cambridge change to the team's performance by labelling it a forfeit. This again will be a change in some nominal sense, but not genuine causation.

In our cases, however, properties are not merely ascribed to things in the past. Those properties are properly instantiated by those things in the past; they instantiate them *in the past*; and they are *made to do so* by events in the present. If we are willing to say all of this, then it is hard to see what is missing that is present in genuine cases of causation.

For example, the wrestling team is made to instantiate the action property of forfeiting. It instantiates that property when it is competing, and it is made to instantiate that property by action

⁹ See Cusbert (2018) on how past events can be chancy in a way allowing for backwards causation.

properties instantiated in the present by the commissioner. But causation, when taken to be a relation between events and where events are construed along the lines of property instantiations/exemplifications (*à la* Kim 1976), just is one property instance leading to another. We might object on the basis of *how* these property instances lead from one to the other (this was the basis of the last objection), but there does not seem to be any clear objection in terms of the property instances themselves.

Another point to make concerning this worry is that the changes in question are not extrinsic or relational in the way that Cambridge changes often are. My cake is the best cake because nobody succeeded in baking a better one. So, it has this property in virtue of its relation to the other cakes. The same cannot be said for our cases. It is not that what the team gains some additional (weightless) property given its relation to other future events. The nature of what is done is fundamentally altered, from winning a tournament to forfeiting it. Kevin's taking of a particular class is not altered; he is made to have taken an entirely different class. A different event occurred.

Further, although Helm (1975) shows that 'Cambridge events' are not efficacious, these events in the past certainly are. They have effects and can even have effects that are themselves in the past (*contra* Torrengo *op. cit.*:248-9). It might be, for instance, that if a team forfeits their final match of the national tournament, then they must also forfeit their first match of the next season. So, even if the verdict is issued a year later, the forfeiture in the tournament is not the only thing caused. The later forfeit is *also* caused, and it can only be caused by the earlier forfeit (if, for instance, the commissioner has no grounds to directly make the team forfeit their first match of the following year). This makes it all the more apparent that the changes made are no mere Cambridge changes.

2.5. These cases involve changing the past, but the past cannot be changed.

My response to this last objection, however, paves the way for another concern. As I have understood backwards causation, it seems to necessarily involve changing the past.¹⁰ However, quite a few philosophers have argued that events in the past cannot be changed. (See, *inter alia*, Smith [1997; 2015], Iacona [2016], Edward [2015], Baron [2017], and Andreoletti & Torrengo [2019]). The thought is that there is something incoherent about changing the past, as it would involve the past's being one way *and then* being made to have been different than it was. That does sound odd. If this reduces to saying that an event at one time has a property and lacks that property, then the cases at hand seem to commit us to a contradiction.

One way of responding to this concern would be to accept that backwards causation does involve changing the past, and then finding ways to meet those arguing against it head on. (For support along these lines, see, *inter alia*, Oddie [1990], Goddu [2003; 2011], Loss [2015], Barlassina & Del Prete [2015], and Torrengo [*op. cit.*]). I am inclined to think that this is the right approach, although seeing it through to satisfaction goes beyond the scope of this paper. What's interesting for us here, though, is not that backwards causation as I have characterized it *might* involve changing the past. Instead, what's interesting is that my understanding of backwards causation does not *require* changing the past.

To see this, consider a fourth case:

¹⁰ Notice that it is this feature that also explains why we don't seem to face the bilking worry that has preoccupied much of the literature. That objection to backwards causation concerns *present* events being caused by *future* events, and the worry is that we are possibly in a position to interfere to stop the future purported cause from occurring. All of our cases so far, however, have not been present events being caused by events that have not yet occurred; they concern past events being caused in the present.

Case 4: Re-Do Checkers

Suppose you are playing Max, a five-year-old, in checkers. Well, almost checkers. Max wants to play a game just like checkers, but he wants it to be the case that after your every move, he has the option of ordering a ‘re-do.’ A re-do takes your move back and his latest move back, and then he is able to choose a different move instead. He also demands the right to a ‘super re-do,’ or the ability to at any time rewind the game back to any state, including the very beginning position, and he wants to retain that right for the whole game. (This is only fair, he argues, because after applying a re-do the game is again in a position where you have just moved, and so he is again entitled to a re-do, leading to an arbitrary succession of re-dos. Separately, Max is an obnoxiously bright child.) You don’t really mind, so you fully agree to these rules. In any case, the game proceeds and, quite impressively, Max plays the game and wins without using a re-do. Good for him.

Here, every move depends upon how Max feels about it after its occurrence. Though Max does not ever use a re-do, any move counterfactually depends on his choosing not to use the re-do option at some point later. The whole game in fact depends upon his choice not to avail himself of a re-do after the last move.¹¹

I want to say that the game as it proceeds is at least partially backwardly caused. Each move depends for its occurrence in the game full-stop upon events later on. Even though Max never actually uses the re-do option, there is still backwards causation in this case (causation by omission). So the past is never actually changed, though it is also not fixed.¹²

2.6. Still, if these cases do involve changing the past, where are the other effects?

Consider the original event of the Tigers’ winning the championship. This event had consequences – celebrations were had, bragging was done. Take the specific event of the championship trophy being put on display at the home of the Tigers’. If we imagine a case of time travel where the past is changed, the rest of the past is typically *re-written*. If the Tigers were genuinely made to forfeit the championship *in the past*, there would not have been parties, nor bragging, and the trophy would not have been put on display. Yet, after the commissioner’s decision is announced, these events *still* occurred. This appears to undermine the claim that the commissioner’s announcement really does alter the past. The

¹¹ Although this case is different such that present events *do* depend on future ones, notice that it’s still the case that nobody has the power to bilk. (So, this is compatible with Garrett [2017]’s argument that backwards causation is not compatible with bilking.) Neither of you has the power to intervene (within the game) to prevent a future choice of using or foregoing a re-do from partially causing the current move. In fact, no one in the world has that power. Even if a friend came in and turned over the table, effectively ending the game, the game would still not technically be finished. (This is clear from *Jumanji*). If we stop playing, it is not that those past moves are settled and not caused by future events; instead, those past moves are never fully determined, because it is constitutive of the game that the moves depend on future choices.

¹² For a case in the actual world, consider long-form improvisational comedy. Actors frequently accidentally do something odd, and thereafter fabricate a story from their character’s past that explains the odd conduct. More mundanely, scenes frequently begin in the present by making assertions to demonstrate a past connection between actors. Once these things are said, they are taken at face value as a part of the past in the world of the fiction. These are present instances that affect the characters’ pasts, but it does not *change* that past, because no determinate past existed. Instead, with each new bit of information, they *nail down* or make more determinate the nature of their past, and other improvisors immediately accept it as truth (at least, when they are doing it well). That these cases involve precisifying the nature of the past instead of changing the past make them seem much closer to the cases discussed in Peijnenburg (*op. cit.*). Notice also that this is not our pretending that backwards causation exists. We are only pretending things about your character. The backwards causation is actual; it’s just a feature of the acceptable conduct for character generation in improv.

Tigers are stripped of their title, but they had been the champions until that point. What else could have caused the trophy's being placed in their case?

To answer this challenge, consider a final case:

Case 5: The Barn Thief

Imagine a child (Barney), born in a barn in rural North Carolina, who goes on to invent time travel. Suppose that no one has been in that barn since Barney was born, though passersby often see the barn and remark on its rustic aesthetic. Assuming the barn will have become decrepit and concerned for preserving it for posterity, Barney decides to travel back in time and steal the whole barn just after his birth. To avoid too many changes to the past, however, he builds a fake barn façade in its stead. Afterwards, passersby often see the façade and remark on its rustic aesthetic.

This case introduces a host of issues involving time travel we cannot resolve here. But there is a feature that will help to answer the objection at hand. In the case, the past has been changed – one object replaces another. For decades, there is a barn façade, not a barn. However, the events that the barn caused are now caused by the façade. The point is that while we would expect that a changed past would have different effects rippling out from the change, further changes are not *necessary* for the past to have been changed. (Perhaps all that is necessary is that further changes were possible.)

In our original cases, we can say that something similar has happened. The past has been changed, though many of the effects emanating out of that past remain the same. And why shouldn't they? Many of the events of the championship still happened. People were moving in particular ways, scorecards were raised, and people cheered. This all gave the impression that the Tigers won the tournament. After all, it looked *just like* an event of tournament-winning.

My claim is that when the commissioner makes the announcement, it causes the team to have forfeited the tournament. There are other ways for a tournament forfeiture to look – the team could have forfeited by making an announcement and not competing. Or the conspiracy could have been uncovered during the tournament, ending their run. But the thought is that much of what happened is *also* how a forced forfeiture can present itself. The events involving the Tigers can constitute the event of their winning, but it could also constitute the event of their forfeiting. However, it can hard to see that the events at the time included a forfeiture until much later.

Moreover, as we saw at the end of (2.4), it may still be that these changes themselves really do cause further changes in the past. If forfeiting the final match of a tournament compels a team to have to forfeit their first match in the next season as well, then the forfeiture causes another forfeiture, even if that forfeiture *also* at the time looked like a legitimate wrestling match. Or, to move away from forfeitures, perhaps being in PHIL756 caused Kevin to be qualified for financial aid for last year, and there is thankfully still an open window for Kevin to fill out the paperwork to claim back that aid from last year. That these events can have effects after the cause of them has occurred is clear enough. (Now, Kevin can graduate.) There is no bar, however, to an event's having effects after it occurs but before it is caused. It just might be hard for us to recognize that these effects have occurred.

3. Conclusion

Much of our lives occurs in institutions of our own design. And we take there to be many efficacious events that occur in the context of them. At the very least, we can be suspicious that the rules of causation—crafted to capture rocks thrown at windows—will apply without issue to causation within

institutions. Why would it? There is already an ongoing discussion how to think about differences in causation at the lower level of quantum physics. Why not at the higher level of institutional reality?

I take the cases 1-4 to present themselves naturally as cases of backwards causation and to suggest that causation within institutions can be backwards. I suspect few readers agree. In fairness, I have not attempted to answer several of the objections that have been given directly to the possibility of backwards causation, nor have I moved forward the conversations on changing the past or time travel. But I have tried to answer some of the specific objections that might occur about the cases. If this will not convince readers that backwards causation is possible in this context, then perhaps it will at least provide fodder for future discussions of causation within institutions. However, I hope that the suggestion will not be brushed aside too quickly, because doing so risks missing just how valuable backwards causation can be.

The case of Re-Do Checkers drives home this value. The child wanted a game to even the playing field between us, and he was able to design one tailored to his preferences. The case is manufactured, sure. But that is not an indictment; it is a recommendation! We often *want* mechanisms for changing things in the past, and we have them. We have embedded such mechanisms into the fabric of our social reality. In this way, backwards causation is not something to be discovered at the fundamental level of physics; it is a technology to be carefully engineered and employed.

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