

Backwards Causation as Actual, Albeit Institutional

Abstract:

Whereas many philosophers take backwards causation to be impossible, the few that 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 frequent. I consider several apparent cases of backwards causation in the context of 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. It is shown that these earlier effects are not problematically necessitated, and that they are not mere Cambridge changes. Further, although these cases involve changing the past, not all such cases do. I end by admitting that our institutions can allow us to change the past in certain ways, and this is a virtue, 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 actual 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 how events involving mass and velocities could exhibit backwards causation. And given how unfamiliar and unintuitive the realm of theoretical physics can be, it is also unsurprising that we

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.

would rest our hopes of backwards causation there. However, I do not think that we must look so far for possible cases of backwards causation. In the social world that we inhabit, on the contrary, 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 discussing what little precedence there is for these kinds of cases, I will gesture towards 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

I made a mistake in graduate school. One semester, say in year X, I registered for PHIL755 rather than PHIL756. Both classes are open-ended dissertation writing classes that one registers in as a formality, but I 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 my affairs were in order to graduate. After reviewing my transcript, recognizing my error, and becoming hysterical, I shared my mistake with the department administrator. Graciously, she assumed the bureaucratic headache of fixing it. Calls were made, emails exchanged, and eventually I was *retroactively* enrolled in the course. By the end of the ordeal, actions taken by my administrator in year X+1 caused me to have technically been registered for and taken PHIL756 in year X. Thank goodness.

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 decision 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.

Once we start imagining cases, we can see that they are fairly common in our social lives, even banal.² They are not surprising or miraculous natural occurrences that only the brightest physicists could discover; they occur as a matter of routine. Thus, backwards causation is not merely possible, but is actual, though these cases occur in the context of social institutions.

In the literature, the rough idea of these kinds of cases are not without precedence. 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 particular possibly brave 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, Torrenzo (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. Torrenzo 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 Torrenzo 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 in these cases. 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 are responsible for developing. 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 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. 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.

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.

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

2. Objections

Whether these actual cases of backwards causation are taken seriously turns most on how seriously we are willing to take institutional facts and events. So, I hope to have said enough to clarify how a proponent should defend them. Given the recent rise of social philosophy with analytic philosophy, perhaps this is a thesis that philosophers are more willing to entertain. At the end of the article, I will have a final point to make about why we should appreciate these kinds of cases. Before that, though, I want to address several other objections that might come to mind.

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 my administrator caused me to have been registered for a different class. Instead, we might say that the actions of my administrator make it such that from that day forward we consider me to have been registered for a different class than the one I in fact was registered for in the past. And similar re-interpretations may be given for the other cases.

I begin with this objection because it has been raised to me,⁵ and it may occur to the reader, but I must admit that it's not entirely clear to me how it constitutes an objection. In my transcript it says that in year X I was registered for and took PHIL756. If we take institutional reality seriously, then there is an event within the institution of the university that was caused, the event of my taking PHIL756, and that event occurred in year X. Further, this event was caused by the actions of my administrator in X+1. It's true that we will treat me as if I had taken PHIL756 only after the actions of my administrator, but the best explanation of this is just the causal story that I have presented: my administrator caused me to have taken the class.

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 [Omitted for blind review.]

The opponent certainly does not deny that my administrator did something to make my transcript say that in year X I was registered for and took PHIL756. They must, then, deny that there was an event of my taking PHIL756 or deny that that event took place in year X. These are respectable points to challenge. However, challenging them does not amount to a challenge *distinct* from the one already considered. Somebody who denies that my taking PHIL756 actually took place in year X seems to simply not take institutional reality seriously, or as seriously as I think we should. The university has an annual calendar on which institutional events are recorded, and my taking PHIL756 is recorded on a previous year's calendar. From the perspective of that institution, I took that class in year X, and this event was caused by my administrator's actions in X+1. Not only is this a good explanation for our treating me as having taken the class thereafter, it's the *only* legitimate explanation from the perspective of the university. I can only be treated as having taken PHIL756 in year X (and so allowed to graduate) if I in fact did take PHIL756 in year X.

2.2. *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 announced their 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 of the discovery of the wrestling team's cheating is arguably a cause of the team's forfeiting in the past. The team certainly 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.⁶ So, on a number of tests for causation, we are led to say that the discovery causes 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, we will want to say something about the above cases to show that they are cases of causation too. One thing to note is that the most natural story for the discovery's counting as a cause of the team's forfeiting is that it causes the commissioner's verdict, the verdict 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 verdict and the forfeiting, but it is a story that hangs together.

We can acknowledge, though that the verdict 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)

⁶ See Cusbert (2018) on how past events can be chancy in a way allowing for backwards causation.

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.

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

A second 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 priest is only making a Cambridge change to the marriage of the past by annulling it, or the commissioner is making a Cambridge change to the team's performance by labelling it a forfeit. These again will be changes in some nominal sense, but not instances of 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 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. My taking of a particular class is not altered; I am 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* Torrenço *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.

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

My response to this last objection, however, paves the way for a final concern. As I have understood backwards causation, it seems to necessarily involve changing the past.⁷ 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 & Torrenco [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 Torrenco [*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:

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.⁸

⁷ 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.

⁸ 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

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. So the past is never actually changed, though it is also not fixed.⁹

3. Conclusion

Hopefully, I have to some degree of success defended the plausibility of actual cases of backwards causation, albeit only in institutional contexts. These cases are commonplace, and I think they resist reinterpretation. Further, I do not think they worryingly involve necessitating effects, Cambridge changes, or that they require changing the past.

Nevertheless, I suspect many readers will not be convinced, perhaps harboring some suspicion about the cases that I have failed to shake. And, in fairness, I have not attempted to answer several of the particular objections that have been given to the possibility of backwards causation, nor have I moved forward the conversations on changing the past or time travel. Where possible, I have tried to side-step the issues not relevant to the particular cases, instead choosing to focus on the elements that would reveal just how ubiquitous these cases are. The hope was that through doing so it would become apparent just how valuable the cases of backwards causation could be.

This last example of the made-up game really 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 of it. In fact, it's 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.

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.

⁹ 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.

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