

The Question of Iterated Causation

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Abstract: This paper is about what I call the Question of Iterated Causation: for any instance of causation in which $c_1 \dots c_k$ cause effect e , what are the causes of $c_1 \dots c_k$'s causing of e ? In short: what causes instances of causation or, as I will refer to these instances, the “causal goings-on”? A natural response (which I call “dismissivism”) is that this is a bad question because causal goings-on aren't apt to be caused. After rebutting several versions of dismissivism, I consider the view that the Question of Iterated Causation, though not illegitimate, is easy to answer: the causal goings-on are apt to be caused but are plainly uncaused (“brutism”). However, I will argue that brutism too has a serious problem: namely, it leads to a highly implausible kind of armchair indeterminism. Next I consider some substantive candidate answers to the Question of Iterated Causation, none of which, I argue, is particularly promising. The paper's final conclusion is twofold: the Question of Iterated Causation is at least as difficult as the more well-known Question of Iterated Grounding; moreover, the largely overlooked regress problem that it raises gives us at least some defeasible reason to avoid causation in theory-building.

1. Introducing the Question of Iterated causation

This paper is about what I will call the Question of Iterated Causation: for any instance of causation in which causes $c_1 \dots c_k$ bring about effect e , what are the causes of $c_1 \dots c_k$'s causing of e ? In short: what causes instances of causation itself or, as I will refer to these instances, the “causal goings-on”?¹ As I hope to make it clear by the end of this paper, not only is this question perfectly legitimate, it also doesn't have an easy answer.

Importantly, my question is not what causes the causes $c_1 \dots c_k$ of some effect e , but rather, what it is that causally brings it about *that* $c_1 \dots c_k$ cause e . This question has received little attention in the literature on causation, and at first glance it may seem puzzling. Its main import is best appreciated by comparing it to a much more familiar question from the recent literature on grounding, a hierarchical structuring relation that connects less fundamental bits

¹ I use ‘going-on’ as an expression that is neutral about the relata of causation, including the possibility that causation is not a relation and therefore doesn't have relata (see section 2). I borrow ‘going-on’ as a category-neutral catch-all term from J. Wilson (2014).

of reality to more fundamental ones and undergirds a distinctively metaphysical kind of explanation.² The notion of grounding raises the Question of Iterated Grounding: what grounds the grounding facts? That is, what should fill the blank space in sentences of the form ‘___ ground the fact that facts $f_1 \dots f_n$ ground g ’?³ The Question of Iterated Causation is to causation what the Question of Iterated Grounding is to grounding. I should note, however, that the question I’m asking doesn’t presuppose any deep structural analogy between causation and grounding.⁴ I merely used the Question of Iterated Grounding as a heuristic tool to provide a better grasp on what the Question of Iterated Causation is asking.

One natural reaction to the Question of Iterated Causation is that it’s somehow confused or unintelligible. If this is your reaction to the question, please bear with me: much of this paper will be devoted to addressing several versions of this complaint. A more polite variant of this reaction is to say something along the following lines: “I can make sense of the question of why $c_1 \dots c_k$ cause e , but the proper answer to this question isn’t one that specifies causes. Instead....” – Substitutes that my interlocutors offered to me in place of the Question of Iterated Causation include the question of what *explains* why $c_1 \dots c_k$ cause e , what *grounds* why (or *in virtue of what*) $c_1 \dots c_k$ cause e , the question of in virtue of what $c_1 \dots c_k$ *rather than some other causes* caused e , the question of in virtue of what $c_1 \dots c_k$ brought about e

² Much of the subsequent literature on grounding has been shaped by Fine 2001, 2012, Correia 2005: Ch. 1, Schaffer 2009, and Rosen 2010.

³ This question has first been raised by Sider (2011: Ch. 7.2) and K. Bennett (2011).

⁴ As do, for example, Schaffer (2016) and A. Wilson (2018). See also Bernstein 2016 and Koslicki 2016 for criticism.

rather than some other outcome, and more.⁵ These are all good questions. But none of them is the question I'm asking.

The rest of this paper will go as follows. In section 2, I will argue against the view that the Question of Iterated Causation is illegitimate because causal goings-on aren't apt to be caused ("dismissivism"). I will first rebut arguments to the effect that the question presupposes causal relations between entities that are of the wrong ontological category to stand in causal relations. I will then consider a more moderate version of dismissivism, according to which the question concerns entities that (independently of their ontological category) lie outside the causal order. In section 3, I will discuss the view that although the question isn't illegitimate, it's easy to answer because while ungrounded grounding facts would be problematic, the view that causal goings-on are uncaused raises no serious issue ("brutism"). However, I will argue that brutism about causation leads to a problem that is no less serious than the one stemming from the analogous view about grounding. In section 4 I will consider some candidate answers to the Question of Iterated Causation, most of them not especially promising. I will suggest, somewhat inconclusively, that the Question of Iterated Causation is at least as difficult as the Question of Iterated Grounding and might not lend itself to a fully general answer. Finally, in section 5 I will draw some lessons from the preceding discussion. One interesting upshot will be that the fact that causation raises a regress problem gives us at least some defeasible reason to avoid it in theory-building.

⁵ See Skow 2016: Ch. 4 and A. Wilson 2018: 740–41 for discussion of some of these questions.

2. Against dismissivism

Although I don't know of anyone who explicitly asked the Question of Iterated Causation, I'm not the first in the contemporary literature to note that causation is intelligibly iterable.⁶ But it's safe to say that these scattered discussions had little uptake in the general literature on causation, and to the extent that there is a default attitude to the Question of Iterated Causation, it is to treat it as confused or even unintelligible.⁷ The general sense one gets is that asking what causes a causal going-on is somehow illegitimate: it asks what causes something that isn't even apt to be caused. Let's call this view dismissivism.

It's worth distinguishing two types of dismissivism at the outset. *Strong dismissivism* holds that either there are no causal goings-on or even if there are, they are of the wrong ontological category to stand in causal relations themselves. On either version of this view, no entity is of the right ontological category to both stand in causal relations and give rise to the Question of Iterated Causation. By contrast, *weak dismissivism* allows that there may be causal goings-on that belong to the same ontological category as standard causes and effects

⁶ See Needham 1988: 215–6, Dretske 1991: 39–44, Mellor 1995: 106, Hitchcock 1996, Koons 1998 and Barnden 2014 for various uses of iterated causal claims. The question of iterability has received more attention in the philosophy of action literature, where some authors defend agent causation in ways that seem to imply a kind of iterated causation (Chisholm 1976: 71, Clarke 1993: 194; cf. Alvarez and Hyman 1998). Some historical thinkers also might have thought that causation was iterable. For example, at least on one reading al-Ghazālī's thesis of divine predetermination might have amounted to a kind of iterated causation: on this interpretation, God is causally responsible for establishing all causal connections in the natural world (TF 170). [Acknowledgement omitted]

⁷ This attitude is especially common in the grounding literature. See, for example, deRosset 2013: 19, Dasgupta 2014: 568 n23, and Schaffer 2017: 19–20.

but maintains that they are inapt to stand in causal relations for another reason: they are “outside of the causal order”. I will tackle each type of dismissivism in due course.

In discussing strong dismissivism, I will make a further distinction between views that construe causation as a relation between events and views according to which causation is perspicuously expressed by a sentential connective that avoids commitment to a *relation* of causation. The view whose absence readers will immediately notice is the one that takes causation to be a relation between facts. This omission is justified, because taking the relation of causation to be facts rather than events would only make my job of defending iterated causation easier. The reasons for this are two. First, as we will see below, event theorists sometimes reject causal events on the basis of the claim that ordinary discourse doesn’t confer ontological commitment to them. But the ordinary language case for causal facts is at least as strong as it is for causal events (if it’s a fact that Suzy threw the rock and it’s a fact that the window broke, and the former caused the latter, then it’s also a fact that the fact that Suzy threw the rock caused the fact that the window broke). Second, one commonly recognized distinction between events and facts is that the latter are more fine-grained: an acceptable ontology of events is often thought to be subject to constraints that don’t necessarily apply to facts (for example that no two events have the same causes and the same effects, or that event names don’t create opaque contexts).⁸ What this means, though, is that whatever the true ontology of facts is, it is at least as fine-grained as the true ontology of events. I.e., for any event expressed by the gerundive forms ‘a’s F-ing’ and ‘the standing of $a_1 \dots a_n$ in F’ there are facts expressed by the subordinate clauses ‘that Fa’ and ‘that F($a_1 \dots a_n$)’, respectively, but not necessarily vice versa. Therefore, whatever restrictions on the ontology of events are invoked to rule out causal events will provide no more (and plausibly less)

⁸ See, e.g., J. Bennett 1988: 21–4.

motivation to rule out causal facts. For these reasons, I trust that my case for iterated causation on a relation-between-facts view would be at least as strong as on a relation-between-events view.⁹

Several philosophers who construe causation as a relation between events appear to endorse strong dismissivism. N.L. Wilson, for example, writes:

“[T]he causing of e_2 by e_1 is not itself an event. (What could it cause? Not e_2 !) To draw a fast conclusion, ‘the causing of...’ does not refer to an event and since an alerting is a causing of someone to become alert, ‘alerting’, ‘killing’ and all the other causative verbs do not refer to events. To hold that they do is to fall victim to a sort of ethereal disease contracted from promiscuous nominalizing.” (1974: 318)

It’s hard to discern an argument against causal events here. The rhetorical question in the brackets asks what such events could cause. But as we will see below, there are perfectly reasonable answers to this question: for example, e_1 ’s causing of e_2 may cause someone’s coming to know that e_1 caused e_2 . Wilson’s next remark is at best understood as an *objection to an argument for* iterated causation: the mere fact that ‘the causing of...’ lends itself to nominalization doesn’t entitle us to naively infer that that the nominalized phrase ‘the causing of e_2 by e_1 ’ refers to an entity, i.e. a causal event. The idea that noun phrases apparently quantifying over causal events don’t provide rock-solid evidence for the existence of such things is also a recurring theme in the philosophy of action literature (where such events are often called “causings”) and has been endorsed by Davidson (1987/2004: 102–

⁹ For similar reasons, I also won’t discuss pluralist views that countenance both event and “sentential” causation (Steward 1997: Ch. 5). If my argument in the rest of this section is along the right lines, these views leave room for both causal events and true iterated causal sentences that use a causal connective.

103), Alvarez (1999: 217) and Ruben (2018: Ch. 7), among others. But the point, while fair so far as it goes, doesn't give us any positive reason to deny the existence of causal events.¹⁰

One might argue, however, that it's not just that there is no conclusive semantic evidence that for the existence of causal events, but strong semantic evidence against it. The argument goes as follows.¹¹ On a broadly Davidsonian methodology, our primary basis for believing in events is that ordinary language confers ontological commitment to them. But then, when a certain expression doesn't introduce quantification over events, we shouldn't believe in events of the type supposedly corresponding to that expression. This is the case with the verb 'cause'. It *would* confer ontological commitment to causal events if it were an activity verb, but it isn't: 'cause' is a stative verb, of the sort that introduces quantification over states rather than events, roughly on a par with 'is tall'. And just as there is no such event as John's being tall, there is no event such as the ball throwing's causing of the window's shattering.

There are a number of things to say in response. First, I don't think that the semantics of natural language settles which events (and in general, which entities) there are in the world; to assume that it does would be to assume that the languages we happen to speak carve reality at its joints, and I see no reason to make this assumption.¹² Instead of trying to read a metaphysics of events off the semantics of natural language, it seems to me

¹⁰ Another motivation sometimes offered for ruling out causal events is that they would raise the question of what causes *them* (Kim 1976/1993: 50; cf. Davis 1979: 35). In the present context, this is obviously question-begging.

¹¹ I thank an anonymous referee for pressing me on this objection.

¹² Even those who are more sympathetic to the semantics-driven approach to event metaphysics usually recognize that ordinary language can at best serve as defeasible evidence here. See, for example, Steward 1997: 92–94 on non-paradigmatic events.

methodologically more fruitful to simply ask what causal events would need to be like on the assumption that there are any. According to a given metaphysics of events, do they have the features that bona fide events normally have? Are there metaphysical constraints of grain, naturalness, and spatiotemporal contiguity that legislate against them? As we will see later on in this section, when tested against these criteria causal events do quite well.¹³

Second, even taking the linguistic approach for granted, I don't think that the argument succeeds. This is because by most salient semantic tests, 'cause' is *not* a stative verb. The distinction between activity and stative verbs has become influential following Zeno Vendler's (1957) work. But Vendler also recognizes two further categories: accomplishment and achievement verbs. Activity and accomplishment verbs (e.g. 'run' and 'run a mile', respectively) can possess continuous tenses, whereas stative and achievement verbs (e.g. 'recognize' and 'believe', respectively) cannot. However, there are some subtle differences between activity and accomplishment verbs. For one, 'stopped Verbing' implies that Verbing occurred when 'Verb' is an activity verb but not when it's an accomplishment verb (e.g. if I stopped running then I ran nonetheless, but if I stopped running a mile, I didn't run a mile). For another, while the question 'at what time' makes sense for activity, accomplishment and stative verbs (less clearly so for achievement verbs), the question 'for how long' isn't applicable to accomplishment verbs (e.g. 'for how long did you run a mile?' sounds awkward, but 'for how long did you run?' doesn't).

¹³ Indeed, there are *paradigmatic* events such that no activity verb naturally comes to mind that would introduce quantification over it. For instance, that most of us believe in storms. Storms are events; yet there isn't any activity verb that introduces quantification over storms ('storm' isn't such a verb; 'rage' might be closer, but at best it introduces quantification over ragings, which are not the same as storms).

These tests pretty clearly classify ‘cause’ as *not* a stative verb, although they are more ambiguous when it comes to deciding whether it’s an activity verb or an accomplishment verb. ‘Cause’ doesn’t look like a stative verb, since it can easily take continuous tenses (e.g. ‘the stock market crash is causing a panic’). It resembles accomplishment verbs insofar as it seems awkward to ask for how long a going-on caused another going-on, whereas it’s fine to ask when it did (more on the temporal location of causal events below). On the other hand, it doesn’t generally seem true (as one would expect with achievement verbs) that if x stopped causing y then y didn’t occur. For example if the stock market crash stopped causing a panic, it follows that the panic *did* occur.

Alternative semantic tests similarly fail to rule out causal events. Noting that many verbs have instances that could fit in various categories in Vendler’s taxonomy, Mourelatos (1978) focuses on types of predication instead. He distinguishes between stative and occurrent predications, and divides the latter category into event and process predications (roughly corresponding to Vendler’s activity/accomplishment distinction). Mourelatos sees a deep analogy between the event/process and the count noun/mass noun distinction: event nominalizations refer to countable, whereas process nominalizations to uncountable, “stuff-like” things (there could only be “more” or “less” of the latter). For example, if John changes his clothes three times then there were three changings of clothes; but if John pushed the cart for hours, then for hours there was pushing of the cart (but it doesn’t make sense in this latter case to ask how many pushings there were). This is a good reason to think that that ‘pushed the cart’ is event-predicating while ‘pushed the cart for hours’ is process-predicating. Here too, however, it seems to me that causings fall on the event side of Mourelatos’ taxonomy, since we *can* often count them. For example, the sentence ‘The malfunction of the traffic lights caused a traffic jam three times’ seems perfectly passable to

me. Moreover, it implies that there were three causings of a traffic jam by the malfunction of the traffic lights.¹⁴

There may be further semantic tests that could help us adjudicate this issue, but I'm skeptical that they will unambiguously rule against the event status of causings, either.¹⁵ Moreover, it's worth noting that the broadly Davidsonian approach of using natural language to arrive at conclusions about the metaphysics of events is separable from Davidson's first-order metaphysical account of events. And the latter, I will argue below, doesn't tell against causal events either.

¹⁴ See also Steward 1997: Ch. 3 for a discussion of Vendler and Mourelatos, and also of Anthony Kenny (whose taxonomy is closer to Vendler's).

¹⁵ Here's a further test: perhaps real event verbs belong to a linguistic category Parsons (1990) calls "causative-inchoatives" verbs. A verb is causative-inchoative if it's related to an adjective in the following way: when some x Verbs (where 'Verbs' occurs in its intransitive form), x may become Verbed not only in the past participle but also in the adjectival sense of 'Verbed' (Parsons 1990: 106). Many words are ambiguous between an adjective and a past participle. A useful test that helps distinguish between them is that when 'Verbed' occurs as an adjective in 'y was Verbed', it should be possible that the sentence is true without there being any z that Verbed y (121). For example, 'close' is a causative-inchoative verb: if someone closes the door, the door becomes closed; however, just because the door is closed it doesn't follow that someone closed it. Now, one could argue that the logical form of 'Jim closed the door' requires ontological commitment to an underlying event (a closing), since 'close' is a causative-inchoative verb, but that the logical form of 'Susan's arrival at the scene caused the dispersion of the crowd' doesn't imply the existence of a causing, since 'cause' is not a causative-inchoative verb. However, I'm skeptical of the reliability of this test in detecting commitment to events, since some fairly uncontroversial events are also most naturally described by verbs that aren't causative-inchoative. For example, 'The police chased the bank robber' clearly seems to confer commitment to an event, namely a chase, but one cannot be chased without being chased by someone. So the causative-inchoative test, similarly to others, can at best serve as a rule of thumb but doesn't suffice to rule out causal events.

Unlike other authors (some of whom I will discuss below), Davidson's metaphysics of events is non-reductive, i.e. he doesn't attempt to identify events with any combination of things from other ontological categories. Nonetheless, he adopts a substantive causal criterion of even identity, according to which an event e_1 is identical to event e_2 just in case e_1 and e_2 have the same causes and effects (1969: 231). This criterion yields a fairly coarse-grained metaphysics of events, but one that is still fine-grained enough to distinguish between e 's being caused by c and e 's merely succeeding c . Now, suppose I *know* that c caused e , and that my knowledge requires some causal connection to its subject matter. Assuming that causation is a relation between events, what could have caused my coming to know that c caused e ? Neither c nor e by itself nor the mere succession of c by e seems enough. The best candidate for causing my coming to know that c caused e is an event that involves c , e , and causation – i.e., the causal event that is c 's causing e . (See the end of this section for more on causally efficacious causal goings-on that.)

There is an additional element of Davidson's view that can be used to argue for the existence of causal events. As Davidson notes, many events are changes in a substance (1969: 228). But some of them aren't. Take, for example, a thunderstorm that causes a flood. Neither the thunderstorm nor the flood is conveniently described as a change in a substance. However, it's natural to say that the thunderstorm is relevantly similar to a substance in so far as changes take place *in* it. That the thunderstorm brings about the flood can be considered one of these changes. This is a point in favor of causal goings-on. For if a change in a substance is an event, then a change in an event that consists in the bringing about of another event may itself be a second-order (causal) event.

In short, then, while many Davidson-inspired theorists may be suspicious of quick inferences from natural language semantics to causal goings-on, there is nothing about

Davidson's *metaphysics* of events that rules out causal goings-on, and certain aspects of it even encourage positing them. Moreover, there is nothing in most alternative theories of events to rule out causal events, either.¹⁶ Take, for example, the view (often attributed to Kim) that an event is an ordered triple of an n-tuple of particulars, a property or n-adic relation the particular or particulars exemplify, and a time (either an instant or an interval) at which the property or relation is exemplified.¹⁷ Despite his hesitation to countenance causal events, Kim is happy to allow for complex events that "include" other events as constituents (1976/1993: 45–46). Causal events could be construed along similar lines, as complex events made up of two smaller events (for example, *the causing of the window's shattering by the throwing of the ball* may be made up by the event that is *the window's shattering*, the event that is *the throwing of the ball*, and the relation of causation). Lewis (1986) identifies events with properties of spatiotemporal regions, which (given his class nominalist metaphysics of properties) he in turn identifies with classes of spatiotemporal regions. On this view, the *causing of the window's shattering by the throwing of the ball* is easily identified with a class of spatiotemporal regions: the class that includes, from each possible world in which the throwing causes the shattering, the spatiotemporal region in which the throwing's causing of the shattering occurs. Similarly, we can easily make sense of causal events on views that identify events with trope sequences (Campbell 1981: 480, 1990: 22): on such accounts, a causal event is identified with the sequence of tropes instantiated in the spatiotemporal region within which the event takes

¹⁶ Noordhof makes a similar point, arguing that (*pace* Mellor) considerations pertaining to iterated causation don't favor facts over events as causal relata (1998: 856–7).

¹⁷ As J. Bennett (1988: 89–91) and Steward (1997: 21–23) note, the view isn't clearly Kim's own, who tends to go back and forth between *identifying* events with ordered tuples and characterizing them as concrete things that are merely *individuated* with the help of such tuples.

place.¹⁸ For instance, *the causing of the window's shattering by the throwing of the ball* may be identified with the sequence consisting of all the natural tropes that fall within the spatiotemporal trajectory of the stone from the time of the throwing until the completion of the shattering.

In the absence of some principled restriction, then, on most theories of events it would be arbitrary to banish causal events. However, one might think that such a restriction is indeed available. After all, most event theorists already seek to impose constraints on the construction of events from their basic building blocks: for example not just any individual-property/relation-time triple corresponds to a Kimian event, and not any class of spacetime regions is a Lewisian event.¹⁹ Moreover, there is a fairly straightforward argument that we shouldn't take causal events on board. It goes as follows. Any plausible restriction on what events there are should rely on criteria of naturalness and spatiotemporal continuity.²⁰ For example it's plausible that there is no such event as *Germany's invasion of Poland in 1939 and a meteor killing off the dinosaurs 64 million years ago* because the two would-be constituent events are too spatiotemporally disconnected to make up a single event. Or take *the turning of the leaves on Mary's tree from green-or-liked-by-Jim to not-green-and-not-liked-by-Jim in October 2020*. It's reasonable to deny that there is such an event on the basis that the predicates 'green-or-liked-by-Jim' and 'not-green-and-not-liked-by-Jim' don't pick out properties natural enough to figure in genuine events.

¹⁸ J. Bennett (1988: 90–91) also argues that events are tropes.

¹⁹ That being said, some theorists are willing to admit even very gerrymandered events into their ontology (see Thomson 1977: 78ff; cf. J. Bennett 1988: 153–6).

²⁰ Lewis 1983 is the *locus classicus* on natural properties and relations.

However, such considerations give us no reason to rule out causal events; on the contrary, they give us some reason to embrace them. First, many instances of causation clearly do well on the criterion of spatiotemporal continuity. Just think of examples like the aforementioned one of *the window's shattering being caused by the throwing of the ball*. There doesn't seem to be anything spatiotemporally discontinuous or gerrymandered about this putative event. Second, causation is not a wildly gerrymandered and unnatural relation on a par with properties like being-green-or-liked-by-Jim. Note that this is a very weak claim. Whether causation is a perfectly natural relation is a difficult question, and one that Humeans emphatically answer in the negative.²¹ However, we can stay neutral about this issue. It suffices to point out that causation is *no less natural* than most of the properties and relations that typically figure in textbook examples of events in the events literature: throwings, shootings, spinnings, and the like. If events can feature these relations, they can also feature causation.

In short, although event theorists of causation have sometimes denied that there are causal events, they didn't make a compelling case for their denial.²² Moreover, the case for iterated causation is even stronger on views that regard causation as perspicuously expressed by a sentential connective. Indeed, Mellor cites iterated causal statements as a reason to adopt such a view:

²¹ See, e.g., Schaffer 2008 for a statement of causal reductionism that is fairly standard today and which implies that causation is not a perfectly natural relation.

²² Similar considerations show that iterated causation cannot be automatically ruled out if causation is a relation between tropes (Ehring 1997: Ch. 3) or aspects (Paul 2000).

“If a cause C and an effect E are entities of the same basic sort – facts – as the fact that C causes E, then causation will be, as it seems, iterable. Moreover, as [sentences of the form ‘(A because B) because C’ and ‘F because (E because C)’] show, the distinctive form of ‘E because C’ need not make the fact that C causes E differ in kind from its constituent facts C and E.” (Mellor 1995: 106)²³

Confusingly, Mellor simultaneously speaks of facts as causal relata and uses a sentential connective to altogether avoid commitment to a relation of causation. I’m going to focus on the second aspect of his view, with one small modification. Since the word ‘because’ is sometimes used to express explanation (causal or otherwise) rather than the worldly relation of causation, I prefer to use the more clearly causal and less historically burdened expression ‘and as a result’.²⁴ This connective can be used to express causal connections without conferring commitment to a relation of causation. For example, instead of saying ‘the throwing of the stone caused the shattering of the window’, we can say, ‘the stone was thrown, and as a result, the window shattered’. Moreover, the connective ‘and as a result’ is clearly iterable: it makes perfect sense to ask what $X_1 \dots X_m$ are such that $X_1 \dots X_m$ and as a result, $(C_1 \dots C_n$ and as a result, E).

Importantly, whether the true ontology of events includes causal events has no bearing on the acceptability of iterated ‘and as a result’ sentences. The whole point of using a connective instead of a predicate is that this way we can speak of causation without reifying it: there isn’t any particular type of entity (event, fact, trope, or what have you) that needs to exist for an ‘and as a result’ sentence to be true. Thus causal goings-on cannot be the wrong category of things to serve as causal relata, since strictly speaking they are not *things* and

²³ Not everyone is convinced; see, e.g., Ehring 2009: 395–6.

²⁴ In this, I follow van Inwagen (2012) and Skow (2016: 33–4).

consequently they don't belong to any ontological category. The connective view allows us to make sense of iterated causation without ontological commitment to either a causal relation or causal relata of any sort.

Let's move on to weak dismissivism. According to this view, there are no category restrictions that would automatically debar us from asking the Question of Iterated Causation; nonetheless, causal goings-on (if there are any) are outside the causal order and thus inapt to serve as causal relata. Glazier (2017: 2881–2) makes a similar point in a different context: causation and grounding differ in their *scope* rather than the category of their relata, since certain facts fall outside of the causal realm but no fact falls outside of the grounding realm. After all, any fact X grounds disjunctions of X with some arbitrary fact Y; likewise, any two facts ground their conjunction. Thus, no fact is “grounding-isolated” from all other facts. By contrast, some goings-on clearly *are* outside of the causal order. Abstract objects, for instance, are causally inert and thus cannot serve as (or be constituents of) causal relata. Perhaps causal goings-on are relevantly similar to abstracta in this regard.²⁵

I don't find this version of dismissivism promising either. Another problem is that while the claim that abstract objects lie outside of the causal realm has a straightforward justification (they are outside of space and time), this justification is unavailable in the case of causal goings-on. Suppose the throwing of the stone causes the shattering of the window.

²⁵ Sider (2020: 755) also argues that causal explanations are restricted in scope in a way that grounding explanations aren't, but he infers that causal-explanatory questions about goings-on that fall outside the purported restriction have trivial answers, rather than that they are illegitimate.

Since both the throwing and the shattering take place in space and time, the former's causing of the latter has to take place in space and time as well.²⁶

It could be objected that it is, in fact, far from clear that the causing takes place in space and time.²⁷ After all, no spatiotemporal region seems especially plausible as the location of a causal event, which may be a reason to deny that there are such events. For example, it's unclear *where* the throwing's causing of the shattering takes place: in the location of the causing or in the location of the shattering? I agree that this is a difficult question (and a close cousin of the "time of the killing" problem in action theory – see Davidson 1985, 1987 and Stocker 1993). I'm inclined to say that the location of the causing is the fusion of the location of the throwing and the location of the shattering. Either way, to infer from the difficulty of determining the location that the causing has no location at all (and doesn't correspond to an event) strikes me as an overreaction. After all, each of the three locations (the throwing's, the shattering's, and their fusion's) is a far better candidate for being the location of the causing than, say, the location of some star millions of light years away from us. This is not the case with paradigmatically unlocated entities: for example, every region of space is an equally bad candidate for serving as the location of the number 4. Note also that the difficulty of identifying an event's spatiotemporal location isn't specific to *causal* events but generalizes to any event that includes two distinct (and spatiotemporally separated) objects instantiating a relation. Take, for example, the event of Sarah noticing a star 5 light years away. When and where does this happen: in Sarah's spatiotemporal location, the star's

²⁶ Armstrong makes a similar point: if neither a's being F nor b's being G are "otherworldly" states of affairs, then the bringing about of b's being G by a's being F isn't, either (1997: 196).

²⁷ Thanks to an anonymous referee for pressing me on this issue.

spatiotemporal location, or the fusion of the two? It's somewhat difficult to say, but this is not a good reason to deny that there is such an event.

The objection from spatiotemporal location could also be rephrased in semantic terms. Suppose someone in Australia threw a stone and thereby broke a window. Then in the sentence 'The throwing caused the window to break in Australia', the locative modifier 'in Australia' should be ambiguous so that it could be read as applying either to the throwing or to the breaking or to the former's causing the latter. But the third reading isn't salient; thus, there are no causal events. Now, bracket for a moment my aforementioned reservations about using the semantics of ordinary language to reach far-ranging conclusions about the metaphysics of events. I don't even find it obvious that the third reading isn't salient; to my ears, it sounds quite passable. More importantly, there are alternative ways of expressing the causing's location that aren't even ambiguous, for example "In Australia, the throwing caused the breaking".²⁸ I conclude that my original point stands, and that being

²⁸ Maienborn (2001) distinguishes between external, internal and frame modifiers. Internal modifiers serve to locate the event they modify (e.g. "Eva signed the contract in Argentina"); external modifiers serve to locate part of the event they modify (e.g. "Eva signed the contract on the last page"); whereas frame modifiers merely set a frame for a proposition, thereby restricting its scope (e.g. "In Argentina, Eva still is very popular"). That in the last sentence 'in Argentina' serves as a frame modifier can be seen from its inferential behavior, as modifier deletion isn't truth-preserving in this case: the sentence could be true without "Eva still is very popular" being true (Maienborn 2001: 191–2). However, the same criterion classifies 'in Australia' in "In Australia, the throwing caused the breaking" as an external locative modifier. For if the sentence is true then so is "The throwing caused the breaking"; moreover, the modifier plausibly attaches to the entire throwing-causing-the-shattering event, and not only to a part of it. Incidentally, this also supports my earlier conjecture that the location of a causal event is the fusion of the location of its cause part and its effect part.

spatiotemporally located, causal events are poor candidates for being outside the causal order.

Another problem for weak dismissivism is that we have independent reason to think that causal goings-on can at least serve as causes. Suppose I know that Bob got angry, punched into the wall, and thereby made it dented. On the plausible assumption that my knowledge in this case is causally linked to its subject matter, my coming to know that Bob's punching caused the wall to become dented was itself caused by Bob's punching having caused the wall's becoming dented. That is, my coming to know a causal going-on was caused by that very causal going-on.²⁹ So causal goings-on can be causes. But then the case for taking them to be part of the causal order is just as good as the case for taking any grounding fact to be part of the grounding order, on account of the disjunctions it grounds. (Note that just like every fact grounds something but not every fact is grounded, it could likewise turn out that causal goings-on are uncaused. But that's different from saying that they aren't apt to be caused, and doesn't justify the claim that they lie outside of the causal order. I will discuss the view that causal goings-on are simply uncaused, despite being apt to be caused, in the next section.)

²⁹ Mellor (1995: 107) gives a similar example. He also offers an intuitive case of iterated causation itself: "Don dies because he falls, because his bones are brittle". I prefer the more roundabout strategy of arguing for the legitimacy of the Question of Iterated Causation *via* intuitive cases in which causal goings-on serve as causes, for two reasons. First, cases involving caused beliefs about causation simply strike me as more compelling than any putative example of iterated causation. Second, since my main goal here is to defend the appropriateness of the question rather than any particular answer to it, I don't want to distract attention from this goal by offering examples some readers might find dubious.

Two remarks about this second argument. First: I'm not assuming that causal relations are directly observable.³⁰ To be sure, that Bob's punching caused the wall to become dented had to make a difference, one way or other, to Jim's learning of this causal going-on. But the mere possibility that Jim's coming to know is caused by the causal going-on doesn't require that he directly perceive that going-on. (Instead, perhaps the causal going-on caused a succession of raw perceptual experiences in Bob that didn't present him with any causal relations but from which he correctly inferred that the punching caused the dent.) Second, I'm not assuming a controversial causal theory of perception, either. Perhaps causal relations are directly observable in the sense that they partly constitute rather than cause our perceptual experiences.³¹ Never mind: as long as there is some causal influence between a causal going-on and a belief about it, it will still be true that causal goings-on can serve as causes.

Let me say what I take myself to have achieved with the foregoing discussion. Dismissivism comes in a stronger and in a weaker version. According to strong dismissivism, causal goings-on are of the wrong ontological category to serve as effects and therefore it is illegitimate to ask what causes them. I have argued that whether we conceive of causation as a relation or as more perspicuously expressed by a causal connective, this is a dubious claim: otherwise reasonable restrictions on the construction of events fail to rule out causal events, the restrictions on causal facts are likely to be even less selective, and they lose whatever

³⁰ Here I depart from Mellor (1995: 107), who does take his examples to show that causation is directly observable. For a classic defense of the direct observability of causal relations see Anscombe 1975, and for a survey of more recent literature on the topic, see Beebe 2009.

³¹ See Snowdon 1980 for a classic defense of the view that perceptual experiences are constitutively related to their objects.

force they might have had when we switch to an ontologically non-committal causal connective. According to weak dismissivism, causation is restricted in scope in a way that grounding isn't: every fact is part of the grounding order, but some goings-on lie outside of the causal order. In response, I showed that even if some goings-on lie outside of the causal order, the causal goings-on aren't good candidates for being among them. In sum: we cannot simply dismiss the Question of Iterated Causation as illegitimate; we need to address it head-on.

3. Against brutism

In the previous section I argued that the Question of Iterated Causation wasn't misguided; on the contrary, it can be asked just as intelligibly as the Question of Iterated Grounding. A natural move at this point is to retreat to a more modest position: although the Question of Iterated Causation isn't ill-formed, confused or otherwise misguided, it's nonetheless much less worrisome than the Question of Iterated Grounding. This is because there is an obvious answer to it: the causal goings-on are uncaused. It's not that they are of the wrong category to be caused or that they lie outside the causal order; they are just uncaused as a matter of fact. Call this view *brutism*.³² The view that the grounding facts are apt to be grounded but are as a matter of fact ungrounded is beset with familiar problems. But, the brutist could insist, there are no analogous problems for the view that the causal goings-on are apt to be caused but are in fact uncaused.

³² I call the view 'brutism' rather than 'primitivism' because the latter is likely to evoke associations with anti-Humean/anti-reductionist views of causation. However, the two theses are distinct: primitivism concerns the reducibility of causation, while brutism concerns the causal status of causal goings-on. (Though as it turns out, the combination of Humeanism and brutism is not stable; see footnote 38.)

This is a good place to remind ourselves of the main objection to the view that the grounding facts, though apt to be grounded, are as a matter of fact ungrounded. In a nutshell, the problem is that if the grounding facts are ungrounded, we are saddled with fundamentalia that intuitively shouldn't be classified as such. There are different ways of formulating this worry, but they all presuppose the widely accepted principle that ungrounded facts are fundamental.³³ Sider (2011: 106–11) subscribes to Purity, the thesis that fundamental truths can only feature fundamental notions. This implies that truths about grounding cannot be fundamental: 'A₁...A_n ground B' features B, which is not fundamental (since it's grounded), and so, given Purity, the whole grounding truth itself cannot be fundamental either. In a different fashion, Dasgupta (2014) argues that various level-connecting theses are best understood in terms of grounding, and that if the grounding facts are fundamental then these theses are falsified. For example, physicalism is the general doctrine that every fact is either a physical fact or is grounded in physical facts. Now take some hypothetical non-physical fact, N. If physicalism is true, there are some physical facts F₁...F_k that ground N. But what about the higher-order fact *that* F₁...F_k ground N? This fact itself isn't purely physical, since it involves N, which is (by assumption) non-physical. If it's ungrounded, then it's fundamental and (given our earlier definition) physicalism is false. But if it's grounded in physical facts, we can ask the same question about the fact that *those* physical facts ground the fact that F₁...F_k ground N, and so on *ad infinitum*. We are facing an unpleasant choice between an infinite regress and the conclusion that some not-purely-physical facts are ungrounded and physicalism is therefore false.

³³ See, among others, Schaffer 2009, Correia and Schnieder 2012: 11, deRosset 2013, Dasgupta 2014: 563, and K. Bennett 2017: 105–7, 122–124.

To be clear, neither of these regress arguments is decisive. Grounding theorists have attempted to address them by arguing that the grounding facts are not fundamental and that a certain version of the ensuing infinite regress is acceptable³⁴, that the grounding facts (or the facts that ground them) are inapt to be grounded³⁵, or (less commonly) that the grounding facts are fundamental but this doesn't go against any non-negotiable principle about fundamentality.³⁶ Still, there is at least a *prima facie* difficulty for the position that the grounding facts are ungrounded but apt to be grounded.

Does the Problem of Iterated Causation raise anything comparably worrisome for the position that the causation facts are uncaused, though apt to be caused? It might appear that it doesn't. The view that the grounding facts are ungrounded is considered problematic because it would seem to follow that they are fundamental, while at the same time, on the "grounded" side of the relation the grounding facts feature facts that are non-fundamental. But, one might think, there is no comparable cost to saying that the causal goings-on are uncaused. This is because causation, unlike grounding, bears no interesting conceptual links to fundamentality, so there is no pressure to say anything general about the fundamentality status of uncaused goings-on. The uncaused nature of causal goings-on implies nothing about their fundamentality status. Thus, one might conclude, even if there is a *question* of iterated causation, there is not much of a problem, let alone a paradox. Hence brutism.

But, as I will now show, brutism is fraught with difficulties. One issue is that we have no independent reason to believe it. And a further worry is that, contrary to the reasoning

³⁴ K. Bennett 2011, deRosset 2013; cf. Litland 2017

³⁵ Dasgupta 2014

³⁶ Jones ms

presented above, brutism *does* raise a problem that is comparable in gravity to the “ungrounded” horn of the Sider/Dasgupta problem.

Let’s begin with the first problem: why should it *always* be true that causal goings-on are uncaused if (as assumed throughout this section) they are apt to be caused? It’s not always implausible to think that causation-apt goings-on of a certain type systematically lack a cause. But in those cases, there is usually an identifiable feature shared by members of the respective type that explains their uncausedness. For example, on some of its construals agent causation involves the causing of an event by a substance (rather than by another event).³⁷ Perhaps causal events of this type are special in that they involve a substance on the “caused”, which might explain their uncausedness. Likewise, if the Big Bang was uncaused, its failure to be caused is plausibly explained by the fact that it was the first thing that ever happened in the history of the universe. (Perhaps the Big Bang itself could have happened without being the first thing that happened. Still, the *de dicto* thesis that for any event x , if x is the first thing that happened then x is uncaused, is very plausible.)

But what is it about causal goings-on that would guarantee that they always lack a cause? Unlike in the case of agents, it cannot be their unique ontological category: as we saw in the previous section, they are of the same category as ordinary causal relata (if they are entities at all). It’s also hard to think of a general *de dicto* thesis that they all fall under and which would bar them from being caused. Indeed, it’s difficult to think of any feature generally shared by causal goings-on other than that they are causal. Consider the following examples: that Hurricane Sandy caused New York to flood in 2012; that the Brein campaign’s failure to present a positive vision of the European Union caused Brexit to win

³⁷ Agent causation has been defended by Taylor (1966: 99–152), Chisholm (1976: 69–72), Clarke (1993), and O’Connor (2000: Chs. 3–4), among others.

in the 2016 referendum; that Bob's chain smoking for 40 years caused his lung cancer; that the bombardment of a molecule with electrons caused it to transform into an ion; etc. Some of these examples involve causation at the macro-level; others causation at the micro-level. Some involve agents; others don't. One of them involves absence causation; the rest don't. Some are deterministic; others are probabilistic. There is really nothing common to these examples other than the fact that they all involve causal goings-on. But to answer the question, 'Why are these goings-on all uncaused?' by simply saying, 'Because they are all causal' seems unsatisfactory.

Here's another way to see why brutism lacks independent motivation. Focus on the following the question: is brutism necessarily true or only contingently so? I submit that it cannot be necessarily true. For if causal goings-on are uncaused as a matter of necessity, then they cannot be apt to be caused. I don't know how a kind of entity, K, can be apt to be caused if no member of K caused in any possible world. So, brutism had better be only contingently true. But if so, why? What is it about the actual world that ensures that causal goings-on never have a cause, even though they are the sorts of things that could have had causes? Lest we implausibly hypothesize a cosmic coincidence, the most salient answer is that brutism is metaphysically contingent but nomologically necessary: the laws of nature prevent causal goings-on from having causes. But at this point, we are stuck. No proposition that is a good candidate for being a law of nature explicitly mentions the absence of causation under given circumstances. Now, I cannot *a priori* rule out that the laws of nature entail the uncausedness of causal goings-on in some more indirect way. But I don't see how this would go, and the burden of proof is on the brutist to demonstrate that there is such an entailment. Until then, I will persist suppose that we have no independent reason to endorse brutism.

Finally, even putting aside the question of independent motivation, let me mention what I take to be a serious problem for brutism. Brutism, it seems to me, unwittingly leads to an armchair “refutation” of determinism. Most official formulations of determinism aren’t cast in explicitly causal language but are formulated in terms of every event being entailed by antecedent total states of the universe and the laws of nature. Nevertheless, no determinism deserving of the name should deny that any event *apt to be* brought about by past causes *is* brought about by them. This qualification is important, since even determinists can accept that (for instance) mathematical truths or gerrymandered Boolean constructions of bona fide events aren’t caused by anything. These cases don’t pose a counterexample to determinism because they aren’t even apt to be caused in the first place. Causal goings-on, however, are an entirely different matter. They are uncaused, but (by stipulation) they are the right sorts of things to be caused. This seems to go against the intuitive core of Determinism that every (causation-apt) event has a set of causes that are jointly sufficient to bring it about.

If you still cannot shake the lingering feeling that the uncaused status of causal goings-on is somehow unproblematic for the spirit of determinism, then I suggest that you still don’t take brutism entirely seriously. If causal goings-on were not even apt to be caused – if they were relevantly like mathematical facts, identity facts, etc. –, then this relaxed attitude would be justified. But only the dismissivist is entitled to treat causal goings-on as relevantly analogous to these cases; according to brutism, they are nothing like them.

The following mental exercise should help appreciate this point. Take a hypothetical position (“probabilism about iterated causation”) according to which the causal goings-on are only indeterministically caused. Surely *this* view clashes with determinism: if the only way that a range of goings-on are caused is indeterministically, then determinism is false. But if some goings-on that are apt to be caused have no causes at all, then they are even less

causally constrained then causal goings-on that were caused indeterministically. Thus if indeterministically caused causal goings-on constitute a genuine violation of causal determinism, then *a fortiori* so do goings-on that are not caused by anything at all.

To wrap up this section, an important moral is that despite its many problems, dismissivism enjoys some significant advantages over brutism. For one, it has a principled (even if ultimately flawed) story to tell about why all causal goings-on are uncaused. Second, when discussing determinism they can put causal goings-on to the side, while brutists need to understand them as standing in genuine and systematic violation of determinism. For according to brutism, causal goings-on *are* the sorts of things that can be caused; it's just that as a matter of fact they aren't. In this regard they are unlike platonic universals or numbers and more on a par with quantum mechanical events and libertarian free will. But of course, nobody would try to defend determinism by simply removing these cases from its scope! In a similar fashion, if causal goings-on were uncaused, this wouldn't just call for tweaks on the standard formulation of determinism but would threaten to constitute a powerful counterexample to its very heart. This is a good reason to shy away from brutism. Determinism may be false, but it shouldn't be *this* easy to prove it false.

4. Can we answer the Question of Iterated Causation?

We have seen earlier that the Question of Iterated Causation isn't easily dismissed as illegitimate. The discussion of the previous section also suggests that it cannot be shrugged off as legitimate but easily answered in the negative, either. Are causal goings-on caused by other goings-on, then? Maybe, but I have little idea as to what these goings-on might be.

One place to look for inspiration is the burgeoning literature on the Question of Iterated Grounding. Unfortunately, the extant answers on the market seem unpromising

when recast as answers to the Question of Iterated Causation. For example, Litland (2017) argues that non-factive grounding facts are zero-grounded in the empty set of facts, and that a natural extension of this view to factive grounding is also defensible. Zero-grounding is often introduced with a machine analogy: if we think of grounded facts as the outputs of a machine that is being fed grounds, the zero-grounded facts are the output that result when the machine is fed nothing. But even if we take on board the notion of zero-grounding, most readers will hopefully agree that the notion of zero-causation is dubious, to say the least. To mention just one problem (which I will also appeal to against other accounts), causation is an external relation: duplicating a cause and an effect doesn't automatically duplicate the causal relation between them. But if zero-causation is relevantly analogous to zero-grounding, then nothing more is needed for the obtaining of a causal goings-on than the obtaining of its cause and effect relata. And given the externality of causation, this seems wrong: Jim could have thrown a stone at the window and the window could have broken without the former causing the latter.³⁸

Or take a causal analogue of Dasgupa's (2014) essentialist view, which would say that causal goings-on are caused by goings-on having to do with the essences of the cause and the effect that feature in them, which in turn aren't apt to be caused. Earlier I argued that we cannot make good on the idea that the causal goings-on are inapt to be caused, and in so far as goings-on involving essences can serve as causes, the same considerations will apply to them. But put that aside; there is an equally damning problem that is specific to essentialist views of iterated causation. Since causes could always be prevented by some extraneous

³⁸ Think, for instance, of preemption: in another possible world Jim throws a stone at the window, then Bert shoots at the window, and Jim's stone passes through the already shattered window. See Collins, Hall and Paul 2004 for an overview of various types of preemption.

factor from bringing about their effects, it isn't necessary that c causes e . But then, since for two things to stand in a relation essentially they have to stand in it necessarily, it *a fortiori* cannot be an essential fact about c and e that the former causes the latter, either.

Similar problems arise with the causal variant of what has come to be known as the “standard answer” to the Question of Iterated Grounding, according to which any grounding fact to the effect that $A_1 \dots A_n$ ground B is grounded by $A_1 \dots A_n$ (K. Bennett 2011, deRosset 2013). The causal analogue would say that a causal going-on is caused by those of its constituent goings-on that are on the “cause” side of the relation. But whatever one thinks of the Bennett-deRosset account of iterated grounding, the analogous view about iterated causation holds much less promise.³⁹ Since a cause c is part of c 's causing of e , the latter cannot obtain without the former. So, it would seem to follow that in cases of iterated causation the effect could not have obtained without its actual cause. This once again goes against the received view that causation is an external relation.⁴⁰

³⁹ deRosset is of the same view and notes that a causal variant of his thesis “would not be plausible” (2013: 14 f38). Bennett (2017) puts forth the view as one about building rather than grounding: for any x and y , if x builds y then x also builds the fact that x builds y . Combined with Bennett's view that causation is a building relation, it follows that causes cause not only their effects but also their own causing of the effect. Thompson (2019) comes close to saying this much when she notes that once the generic notion of building is replaced with specific building relations in Bennett's formulation, we get some fairly implausible results (for example that x composes x 's grounding of y). In response, Bennett (2019) opts for the restricted thesis that for any x and any building relation R , if Rxy then x grounds x 's bearing R to y . So in the end, Bennett too rejects the causal analogue of her and deRosset's answer to the Question of Iterated Grounding.

⁴⁰ Another puzzling consequence of the causal analogue of the Bennett-deRosset view: it entails that every instance of causation involves an infinite number of events, each of which begins at the same time. I think this should strike as implausible even those who allow causes to be simultaneous with their effects, but I won't

So what *would* a satisfactory answer to the Question of Iterated Causation look like? I'm not sure. At any rate, I will mention two further candidates, which strike me as more promising than the aforementioned views. The first suggestion is that the causes of causal goings-on are background conditions: when *c* causes *e*, there is a background condition *b* that causes *c*'s causing of *e*. For example, the causing of the explosion by the throwing of the cigarette butt is caused by the presence of gasoline in the scene. Call this the *background-conditions account* of iterated causation.⁴¹ While the background-conditions account seems more promising than the answers previously considered, it still faces difficulties. One issue is that it's not clear how the proposal generalizes beyond the first iteration of causation: what causes the presence of gasoline causing the causing of the explosion by the throwing of the cigarette butt? Citing further background conditions doesn't seem to cut it, since these are more plausibly just further causes of the first-order causal event.

A second and to my mind more serious problem with the background-conditions account is the following. It often varies with the context whether the same factor counts as a cause or as a background condition in a causal setup. For example, we normally say that the presence of gasoline was a background condition and the throwing of the cigarette butt a cause. If Jim habitually throws away his cigarette butt before crossing the bridge but only caused an explosion on one particular occasion, it's natural to say that what caused the explosion on that occasion was the presence of gasoline. However, this means that we can say both (in one context) that the presence of gasoline caused the causing of the explosion

press the point here. Donagan (1977: 701) makes a similar objection to Chisholm's account of agent causation, which leads to an infinite regress of just this form; see also O'Connor (2000: 57–58) for further discussion.

⁴¹ Thanks to an anonymous referee for suggesting the background-conditions account as a potential answer to the Question of Iterated Causation. DRETKSE

by the throwing of the cigarette butt and (in another context) that the throwing away of the cigarette butt caused the causing of the explosion by the presence of gasoline. In other words, we have a causal structure in which A causes (B causes C) and B causes (A causes C). This is not exactly a formal violation of the asymmetry of causation, but it's something close to that in spirit: two events cause "expansions" of each other, i.e. effects that include the respective event as a part. I find this result counterintuitive enough to reject the background-conditions account, or at least to put it aside in the hope that we can find a better alternative.

Here's a second (to my mind, more promising) possible answer to the Question of Iterated Causation. Perhaps for any causal going-on, c's causing of e, whatever causes c also causes c's causing of e. For example if Bert's making Anne angry causes Anne to throw a stone at the window, it *also* causes the shattering of the window being caused by Anne's throwing a stone at the window. Call this the *proximate-causal view* of iterated causation.⁴² Note that this account doesn't violate the externality of causation: the cause component of a causal going-on isn't identical to that causal goings-on's cause, so causal goings-on don't necessitate their causes. There are, however, two issues with the view. The first one is that it cannot hold with full generality. If an uncaused going-on c causes something, e, c's cause cannot bring about c's causing of e, since c itself has no cause. Perhaps this is an acceptable price to pay, and those who are sympathetic to the proximate-causal view should simply say that a causal going-on, e's being caused by c, is caused by c's cause when it has one and is uncaused otherwise. Unlike brutism, this view classifies as uncaused only those causal goings-on whose cause has already been classified as uncaused for independent reasons and thus doesn't yield an armchair "refutation" of determinism.

⁴² After rejecting the causal analogue of the Bennett-deRosset view, O'Connor appears to suggest something like the proximate-causal view for cases of iterated causation that don't involve agents (2000: 58).

The second problem is more serious: it seems to me that any intuitive counterexample to the transitivity of causation will be an equally persuasive counterexample to the proximate-causal view. To be clear, the point is not that the account *entails* the transitivity of causation. Rather, given their structure the standard counterexamples to transitivity seem equally convincing as counterexamples to the proximate-causal account. Suppose, for instance, that Jack critically wounded Ken, this caused Ken to be treated in the hospital, and his treatment caused his condition to stabilize, as a result of which Ken went on to lead a long and healthy life. Intuitively, Jack’s critical wounding of Ken didn’t cause Ken to go on to live a long and healthy life. But, I submit, it’s equally implausible that Ken’s leading a long and healthy life is a result of his getting treatment in the hospital having been caused by Jack’s critical wounding of Ken.⁴³

In light of these problems, I’m somewhat inclined to think that the Question of Iterated Causation doesn’t have a fully general answer. That is, the best approach to the question might be a causal analogue of Ted Sider’s (2020) “miscellaneous” treatment of iterated grounding, according to which we should address the Question of Iterated Grounding on a piecemeal basis (hopefully subsumable under a few basic types of cases) and not hope for a completely general answer. However, the situation might actually be direr in the causal case. Causation is not as well behaved as grounding and obeys relatively few general principles that could serve as guidelines in finding at least restricted answers to the Question of Iterated Causation. But we shouldn’t despair just yet. There have been no serious attempts to come to grips with the problem; my sole aim in this paper has been to present it and to argue that

⁴³ Of course, this intuitive case against the proximate-causal view is no stronger than the intuitive case against the transitivity of causation. The issue remains controversial; for discussion of similar counterexamples see Kwart 1991, McDermott 1995, Collins 2000, Paul 2000, Hitchcock 2001, and Lewis 2004.

it *is* a problem. When a philosophical problem starts being taken seriously, we rarely have to wait for long before solutions appear on the scene. So, while I myself am quite unsure what a good answer to the Question of Iterated Causation would look like, I'm hopeful that others will be more imaginative.

5. Concluding remarks

In this paper I have argued that the Question of Iterated Causation is no less serious than the much-discussed Question of Iterated Grounding. It cannot be made to go away by imposing restrictions on the causal relata or by treating causal goings-on as special in being systematically uncaused. I also showed that the leading answers to the Question of Iterated Grounding were implausible when reformulated as answers to the Question of Iterated Causation. It remains unclear what a truly satisfactory answer would look like; the proposals I considered don't strike me as promising, but since there has been no systematic attempt to address the question, I'm in no position to assume that better answers aren't forthcoming.

Suppose you are persuaded of the paper's main thesis, namely that the Question of Iterated Causation is a legitimate, substantive and difficult question. Then what? One moral is methodological. In recent years, the extent of conceptual and structural similarities between causation and grounding has been the focus of intense scrutiny (see footnote 4). While explicit interest in grounding is a relatively recent phenomenon, we have decades of conceptually and technically sophisticated work on causation to rely on that could inform our theorizing about grounding. But the grounding-causation analogy is very much a two-way affair, and it may well be that a full theory of causation should also be informed by recent developments in the grounding literature. It is somewhat unfortunate that the lessons I have argued this literature has for philosophers of causation are largely negative: there is a

much-discussed puzzle about grounding that has an equally worrisome (but neglected) analogue for causation. But negative or not, I take this to be an important lesson. The second moral I wish to draw is closely related to the first: given the regress it raises, causation is a costlier theoretical tool than usually taken to be these days. The very fact that the notion of grounding raises a regress problem is widely considered a strike against it as a theoretical tool, even if not a decisive one. Likewise, we may take the regress problem induced by causation as a defeasible reason to avoid it in theory building whenever possible.

There is a lot more to be said about the wider implications of the phenomenon of iterated causation, but this is a good place to stop. My main ambition has been merely to put the problem on the table and argue that (contrary to what I suspect will be many readers' first impulse) it really is a problem. If by now you are at least a little worried, this paper achieved its main goal.⁴⁴

⁴⁴ [Acknowledgments omitted]

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