Events and Their Counterparts

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Abstract

This paper argues that a counterpart-theoretic treatment of events, combined with a counterfactual theory of causation (call this combination CCT), can help resolve three puzzles from the causation literature. First, CCT traces the apparent contextual shifts in our causal attributions to shifts in the counterpart relation which obtains in those contexts. Second, being sensitive to shifts in the counterpart relation can help diagnose what goes wrong in certain prominent examples where the transitivity of causation appears to fail. Third, CCT can help us resurrect the much-maligned *fragility* response to the problems of late pre-emption by understanding fragility in counterpart-theoretic terms. Some reasons to prefer this CCT approach to rivals are discussed.

Keywords: Counterparts; Events; Transitivity; Pre-emption; Contextualism.

Transitivity and Proportionality in Causation[*]

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In this paper I will argue that a particular approach to individuating events can help us account for the context-sensitivity found within our causal discourse. I will also argue that this way of understanding the context-sensitivity of our causal talk has two further benefits: it allows us to highlight a problem with well known counterexamples to the transitivity of causation and it may help resolve the problem of late pre-emption for counterfactual theories of causation. I'll first introduce a counterpart theory of events and then show how this can be utilised, within a counterfactual theory of causation, to track certain contextual shifts in the causal claims that we are willing to endorse. I will then demonstrate that this framework can be used to show, as others have before, that there is a problem with certain supposed counterexamples to the transitivity of causation. Finally, I will apply this contextualist approach to the recalcitrant problem of late pre-emption by highlighting a clue we have about the context of such cases. I claim that these successes offer us good reason to adopt a coarse-grained, counterpart-theoretic view of events.

1 Counterpart Events

A theory of events must come down on one side or other of at least three controversial debates. The first concerns the *grain* of events that one might endorse, the second the *modality* and the third concerns *essence*.

Regarding grain, we may count many events in a given region of a world or we may count very few, perhaps even just one. Those who count many events in a given region (notably Kim (1973), Lewis (1986b)) consider events to be constituted in part by their *constitutive* or *essential* properties, and so

consider a given region of a world to have at least as many events as there are different viable constitutive/essential properties. For example, they will count three events in Ava's apartment—a loud party, a crowded party and a birthday party. These are the *fine*-grainers regarding event individuation. Those who count just one event per region, or at least very few, are by comparison *coarse*-grainers. Davidson (1969) is perhaps the most notable coarse-grainer regarding events,[1] the primary benefit of which is that where a fine-grainer counts three events in Ava's apartment, the coarse grainer, in line with common sense, counts just one (Ava's party) which has been multiply described.

Regarding modality, we may consider events to be transworld or world-bound. Those who take events to be transworld (e.g. Lewis (1986b)) consider the region of our world that locates the event to be just one of many worlds in which *that* event occurs. Those who take events to be world-bound (e.g Schaffer (2005)) are endorsing the view that events occur in just one world. The world-bound events theorist may still endorse the idea that *the same* event occurs in another world in virtue of having counterparts in that world but it is important to note that the *sameness* invoked here is not the strict sameness of numerical identity, but rather a sameness in some dimension of similarity.[2] Whether one is a fine-grainer or a coarse-grainer does not strictly determine the modality one might subscribe to and so the issues concerning the grain and the modality of events cross-cut.

Regarding essence, one might consider events to have a fixed essence or not. Those who take the event to have a fixed essence will consider the event to have that essence regardless of the context in which the event is represented and irrespective of the interests of those doing the representing. Such theorists are *essentialists* about events. Those who think the event does not have a fixed essence may think it has no essence at all, or may think that events have an essence that is at least partly determined by the context and interests that surround its representation. These theorists are, by comparison, *anti-essentialists* about events. Once again, issues of grain clearly cross-cut this distinction. Less obviously, the issues of modality cross cut the distinction too—one can be an essentialist counterpart theorist (see Lewis (1968) on objects) or an anti-essentialist trans-world theorist (see Lewis (1986b) on events).

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[1]Quine (1985) and Schaffer (2005) also endorse a coarse-grained theory of events.

[2]The world-bound events theorist need not endorse counterpart theory, or in fact any interpretation of modal talk that is meaningful. For example, they may not take the subjunctive conditionals concerning actual events seriously and so would not owe any account of their truth conditions.

Settling these debates individually would require discussing the benefits and commitments of the various options across a wide range of connected issues regarding ontology, the nature of parsimony, the nature of properties, laws, possible worlds and essences. Such wide ranging implications make the debates about events complex, fragmented and notoriously difficult to resolve.

Instead, I will simply endorse one particular view of events and go on to show what use it can be put to. I will take events to be regions of worlds and I will assume that there is just one event which wholly occupies each region. These events are world-bound but they retain a modal profile through a counterpart mechanism—events have counterparts in other worlds, they do not literally exist in other worlds. Finally, the essence of an event is determined at least in part by the context and the mode of representation of that event and so which regions of other worlds are counterparts is not *fixed* but rather *lax and shifty* in Schaffer's phrase (2005, p.325, fn.13). In short, I will be endorsing a coarse-grained, world-bound, anti-essentialist and counterpart-theoretic view of events.

I will denote a given event by a lowercase letter (c, d, e etc.) and I will indicate different *sets of counterparts* associated with that event by different subscripts (c_n, c_m, c_x etc.). It is important to note that a shift in counterpart relation can shift which counterparts are associated with one event and yet not shift those which are associated with another. For example, e may be taken to have set of counterparts y under counterpart relation R and taken to have set of counterparts z under counterpart relation S, whilst event c has the same set of counterparts, n, under both R and S. Thus I use the subscripts to indicate the sets of counterparts associated with the event, not the counterpart relation itself. Of course, the sets of counterparts associated with any given event is determined by the counterpart relation which applies in that context.

I will now turn to three issues in the philosophy of causation to which such a theory of events can be fruitfully applied.

2   Causal Contextualism

In this section I will consider a pair of widely discussed examples which seem to show that our willingness to endorse certain causal claims is sensitive to the context and the mode of representation of the events involved. I will first introduce the causal theory that I will be working with, and then I will go on to show how my preferred counterpart-theoretic view of events lets us

track the contextual shifts in each example.

I will be using a simple counterfactual test for causation to assess each case. I'll consider c to be a cause of e iff there is a chain of causal dependence between c and e, where c causally depends on e iff in all of the closest worlds where c does not occur ($\neg Oc$), e does not occur ($\neg Oe$). This is just Lewis's 1973 account of causation *modulo* a limit assumption for simplicity.[3] Now, this simple counterfactual analysis of causation is widely taken to be false— Lewis himself abandoned it (2004)—but it is simple and widely understood and its shortcomings will not affect what I say here. Interestingly, the reasons for thinking Lewis's theory false have not been considered in light of a counterpart theory of events. Later I will return to a well known problem the theory (it's inability to deal with cases of late pre-emption) in order to show that counterpart theory can help there too, but in this section I want to show how counterpart-theoretic events, within a counterfactual theory of causation, can help track intuition in some standard cases of the context sensitivity of causal claims.

I note here that there are at least two ways of combining the counterpart-theoretic view of events that I have adopted with a simple counterfactual theory of causation.[4] The first way takes the relata of causation of be event-counterpart pairs, and posits a single relation of causation which captures all of the connections between them. This approach posits one event per region, but many causal relata. The second approach takes events themselves to be the relata of causation, but takes there to be a different causal relation for every different counterpart relation. This approach traces the context sensitivity of our causal attributions to the verb 'to cause', and takes that verb to pick out different relations in different contexts. Each approach will yield the same truth conditions for any given causal claim relating c and e under a particular counterpart relation R, so the honours are roughly even in terms of the results that each approach will give. That said, I adopt the first approach here for two reasons.

First, recall that the counterpart relation that obtains in one context (R) can differ from that in another context (S) without affecting the set of counterparts associated with a given pair of events c and e (since R and S could differ only in the counterparts associated with event f). Now, suppose that under counterpart relation R, c has set of counterparts n, and e has set of counterparts m. Suppose further that e_m counterfactually depends

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[3]See Lewis (1986d) for a reprint of the original work together with some important post-scripts. The simplifying role of the limit assumption is mentioned on p.164 but is discussed more fully in his (2001, p.19 - 21).

[4]I thank an anonymous referee for helping to draw out the options.

upon c_n and thus that there is a causal relation between c and e. If every new counterpart relation were to give rise to a new causal relation, then there would be a different causal relation between c and e for every different counterpart relation that assigned c and e the sets of counterparts n and m respectively. In other words, there would be uncountably many *different* causal relations between c and e, quite irrespective of how many *different* assignments of counterparts to c and e passed the counterfactual test. This seems like drastic over-counting of causal relations.

Second, I think the represented essence of an event can shift in the absence of any causal language. It seems plausible that Ava's party could be essentially loud, but only accidentally involve Ava, in the context of her neighbour, and yet for the party goers, and for the host, it essentially involves Ava and is only accidentally loud. If this is correct, then we must allow that the represented essence of an event can be context sensitive quite independently of that event's role in a causal assertion. Therefore, it makes sense to trace the context sensitivity of causal claims to the shifts we already observe in the representation of the events involved. There is no need to posit an extra variable, also sensitive to context, in the semantic value of the verb 'to cause'.

I am now in a position to state clearly the theory of causal dependence I will be working with.[5] I will refer to this working account as CCT (for Counterpart-theoretic and Counterfactual Theory):

> **CCT:** e causally depends on c, under counterpart relation R, iff
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> $$\neg Oc_n \mathrel{\Box\!\!\to} \neg Oe_m$$
>
> where n and m are sets of counterparts for c and e respectively, as determined by R.

With this account in mind, I can now turn to two cases from the literature which appear to show that our causal attributions are sensitive to context. I aim to show that CCT gives intuition-matching results in these cases.

The first is from Hitchcock (1996). In this example we are asked to suppose that Susan has her eye on two items in the same store: a bicycle and a pair of skis. One night she breaks in and steals the bicycle. Thus we have the following event:

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[5]Once again I stress that this is not offered as a final analysis but rather a working account to show the benefits of adopting a counterpart theory of events within a counterfactual theory of causation.

1. Susan's stealing the bicycle.

Now consider how the causal implications change as we introduce emphasis on different parts of the event phrase:

2. Susan's *stealing* the bicycle caused her to be arrested.

This appears to be true, whereas the following appears to be false:

3. Susan's stealing the *bicycle* caused her to be arrested.

It seems that the shift in emphasis from 'stealing' in (2) to 'bicycle' in (3) also shifts the acceptability of the causal claim that Susan's stealing the bicycle caused her to be arrested. What is the emphasis shifting?[6] My proposal is that the shifts in the event expressions indicate shifts in which counterpart relation is being represented.

If we take the emphasis to indicate what is essential to the event,[7] then we can see that in (2), all of the counterparts to the cause, c, will involve stealing—stealing of a bicycle or skis or whatever else. I will indicate the relevant set of counterparts using n, and so c under the relevant counterpart relation is denoted as c_n. The closest $\neg Oc_n$-worlds (i.e. the closest worlds where c does not occur) will be those where no such c counterpart, i.e. where no such stealing event, takes place. All else being equal, the closest $\neg Oc_n$-worlds will not feature Susan's arrest, e_x, and so those closest $\neg Oc_n$-worlds will be $\neg Oe_x$-worlds too. By the CCT test, this means that c is a cause of e in this context and that (2) is true.

Turning to (3), it seems that in this representation all of the counterparts to the cause, c, will involve a bicycle: stealing of a bicycle, riding of a bicycle etc. I will indicate this *different* set of counterparts for c with the letter m, and so c under the new counterpart relation is denoted as c_m. The closest $\neg Oc_m$-worlds will be those where no such c event, i.e. no such bicycle-involving event, takes place. All else being equal, the closest $\neg Oc_m$-worlds will still bring about Susan's arrest, e_x, because the closest such worlds contain counterparts of c which are still stealings, just not of a bike (perhaps of skis). So some of those closest $\neg Oc_m$-worlds will be Oe_x-worlds. By the

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[6]Hitchcock (1996) argues that the emphasis implies an alternative 'contrast' event. I am proposing a different solution.

[7]It is important to note that reading the essence from the emphasis works well in this simple case, but more complex cases will require much more careful assessment of the context. Emphasis will typically be just one clue among many.

CCT test, this means that c is *not* a cause of e in this context and that (3) is false.

So, a counterpart theory of events, coupled with a counterfactual test for causation, can match intuition on this emphasis-shift case by tracking shifts in the represented essence of the event.[8] The counterpart-theoretic notation lets us show this clearly.

The next case uses the well-worn example of McEnroe's serve and is taken from McDermott (1995). This case concerns the impact of altering the description that is used to pick out the event and illustrates the impact of re-description of the event: different counterfactual conditionals hold. This first sentence seems acceptable:

4. McEnroe's tension caused him to serve awkwardly.

Yet, when we remove the adverb, we change the acceptability of the claim:

5. McEnroe's tension caused him to serve.

The difference between (4) and (5) is the removal of the adverb 'awkwardly'. Presuming that there only was one serve being discussed, we might think that the change in description should be innocuous with respect to the causal status of the event. However, simply to 'serve' could be to do so gracefully, but to 'serve awkwardly' could not, so there are counterparts of the serve in (5) which are awkward, and ones which are graceful (counterpart set m), whereas there are only awkward counterparts to the serve in (4) (counterpart set n). The re-description is not so innocuous after all.

If we take the effect-side event to be represented as essentially awkward, as I take it the first description implies, then there will be some $\neg Oe_n$-worlds—the closest ones—where McEnroe still serves, just not awkwardly. The closest worlds in which McEnroe is not tense are worlds in which he is still primed to serve, just absent the tension. So, we can expect that all of the closest $\neg Oc_x$-worlds (not-tense worlds), will turn out to be $\neg Oe_n$-worlds (not-awkward worlds). That makes the first claim true on a counterfactual test.

If we take the effect-side event to be represented as essentially a serve, as the second description implies, then all of the $\neg Oe_m$-worlds will be worlds without a service. The closest not-tense ($\neg Oc_x$) worlds remain exactly like

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[8]Note that I claim only that the representation of the event's essence is shifty. This is so that I can remain neutral here about whether or not the event's essence is genuinely shifting.

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the actual world in other respects—McEnroe throws the ball and arches his back just as he does in the actual world. At least some of the closest such $\neg Oc_x$-worlds will yield a serve and so will be Oe_m-worlds too. Thus, the second claim fails the counterfactual test for causation.

Once again, armed with a sensitivity to the shifts in the essence being represented, as implied by the different descriptions, the CCT account tracks our intuition. The claims that the counterfactual test says are true, we intuit as acceptable, those which the counterfactual test considers false, we intuit as unacceptable. So, as long as there is an element in the semantics that tracks the shifts in the essence being represented, whilst keeping the actual-world region being picked out the same, a counterfactual theorist about causation can diagnose the contextual/representative shifts and defuse a worry about their view. The counterpart-theoretic view of events on offer does exactly that.

Before moving on, I wish to address a potential worry. It may be objected that if the truth of our causal claims is to shift so significantly by mere re-description, then causation cannot be the objective, mind-independent feature of the world that we ordinarily take it be. It should be noted, however, that this worry arises directly from the fact that we are taking seriously the data concerning the acceptability of causal claims across contexts and is not a product of the view of events being posited. If the truth of causal claims is to shift across contexts, then either the causal facts do too, or there is some gap between the causal facts and what makes our causal claims true. My presentation of the issues here will remain carefully neutral on that further point (though see my McDonnell (2015) for an opinionated discussion of this issue in counterpart-theoretic terms).

2.1 The Fine-grained Alternative

The solution I offer here requires that (i) the *events* referred to in each case remain the same under re-description, and (ii) that their represented modality shifts under re-description along with the essence-under-description. Both of these features I consider attractive. McEnroe's serve *just was* his awkward serve, and CCT captures this by referring to the same events (c and e) when interpreting causal claims 4 and 5. As Schaffer points out, "[w]e are discussing a single serve."(2012, p.40) Nevertheless, each different description invokes a different background grouping for that event, and this impacts on the causal assertions we are willing to make. So, whilst the events picked out remain the same, the causal implications do not. In short, I count a single event per region but potentially many causal relata.

This approach is not available to the fine-grainer about events who must reject (i), nor to the transworld theorist or essentialist who each must reject (ii): if it has a different modality the transworld theorist must think it a different event and if it has a different essence then the essentialist must too. However, we could track the intuitive readings of the cases were we to join with the fine-grainer and reject that the serve and the awkward serve, or the stealing of the *bicycle* and the *stealing* of the bicycle were the same event. If each phrase picked out a different event then it is straightforward to account for the shifts in causal assessment without appealing to shifts in the modality or essence of a particular event, since the events under discussion are not the same in each case. The fine-grainer, transworld-ist and essentialist about events will all prefer this second approach, but I do not.

Counterpart theory, as applied to objects, is supposed to save us from positing a multiplicity of different objects in a given region, even when we are inclined to think of the matter in that region as having more than one essence. Borrowing from Gibbard (1975), we might consider Goliath (a statue created by bringing together two shaped pieces of clay) to be essentially a statue, and yet consider Lumpl (the combined lump of clay created when the two pieces are combined) to be essentially a lump of clay. In Gibbard's version of this example the statue/lump is annihilated so that there is no period where Lumpl can be said to exist but where Goliath cannot.[9] Since Lumpl can survive being squashed, but Goliath cannot, we must accept that there are attributions which are true of Lumpl and false of Goliath and so, by Leibniz's law, Lumpl and Goliath cannot be identical. Are we therefore obliged to count two objects in the space-time region that both Lumpl and Goliath wholly occupy? Thankfully not, if we adopt a counterpart theory of objects. 'Lumpl' picks out both the object that occupies the region *and* a set of other-worldly counterparts. 'Goliath' picks out the same object that occupies the same region *and* a *different* set of other-worldly counterparts. Thus we can account for the difference without multiplying the objects in that region of the actual world. As Lewis puts it:

> We have one thing. What we have two of, besides names for it, are ways of representing...Evidently the way the representing works is not constant. One name evokes one way of representing, and the other another. At least in this way the difference of names matters, though they differ not at all in what they name.

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[9]This embellishment confounds temporal-parts solutions to the ancient puzzle which distinguish the duration throughout which Goliath and Lumpl existed when the statue is merely squashed rather than annihilated.

(Lewis, 1986c, p.249)

I am not alone in finding this an attractive account of objects.[10] What I am proposing is a parallel account of events which brings parallel benefits. As with the divergent attributions that can be made of Goliath and Lumpl, we must recognise that divergent causal attributions can be made about events under different descriptions. That being so, counterpart theory allows us to account for this divergence without requiring that there be multiple entities to match the multiple representations. Counterpart theory avoids this apparent 'double counting' (Lewis, 1986c, p.252).

We must take care not to overstate the point, however. The fine-grainer does not posit an additional sort of entity that the counterpart theorist does not.[11] Counting multiple objects, or counting one, makes no difference to the ontological categories that we require and neither does counting multiple events rather than one. However, the fine-grained events approach incurs a cost that the counterpart-theoretic alternative does not: it must deny the perfectly ordinary assertion that the loud party *just was* Ava's party, that Suzy's theft *just was* the theft of a bicycle, or that McEnroe's awkward serve *just was* his serve. Thus counterpart theory captures the sense that there is just one event being multiply described whereas the fined-grained view by contrast, and quite opposed to common sense, counts multiple events. In this way, counterpart theory better fits the data.

Of course, nothing said so far strictly requires that one reject the fine-grained view, and it is not my goal in this paper to show that one must. Nevertheless, I do think that it is important to note that whatever the cost of over-counting events, it can be avoided by adopting the CCT view. I will return to this issue in §5.

2.2 Contrastive Contextualism

The purpose of this paper is to show the merits of a particular approach to events within a counterfactual theory of causation. The aim, here at least, is not to show that it is a uniquely superior view, however a prominent rival account of the contextual shifts in our causal attributions deserves consideration. The account in question comes from Schaffer (2012) and endorses a contrastivist approach to causation in general, and context-variation in particular. On this view, the presence of the word 'causes' is taken to project two additional argument places in the semantics. Beyond the ordinary c

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[10]Though see Merricks (2003) for an important critique.

[11]I thank an anonymous referee for pointing this out.

and e that represent the cause event and effect event, Schaffer's contrastive theory of causation requires that we specify contrasts to the cause ($c*$) and effect ($e*$) respectively. So Schaffer interprets our ordinary causal claims about c and e as actually relating c, $c*$, e and $e*$ in a quaternary relation. The idea is that when we say 'c caused e' what we really mean is something of the form 'c rather than $c*$ caused e rather than $e*$' and it is the context which dictates what the salient $c*$ and $e*$ might be. In a given context 'c causes e' is true iff c occurs, e occurs, and if $c*$ had occurred $e*$ would have occurred.

The contrasts in the quaternary relation are sensitive to context and so shifts in the semantic content of causal assertions can be traced, on Schaffer's view, to shifts in the contrast places. Taking the McEnroe example from above, the acceptable claim in (4) is interpreted as:

6. McEnroe's being tense *rather than relaxed* caused him to serve awkwardly *rather than gracefully.*

And the unacceptable claim in 5 is interpreted in the following way:

7. McEnroe's being tense *rather than relaxed* caused him to serve *rather than not serve.*

When the serve appears on its own in 5, it triggers a non-serve as a contrast. However the presence of 'awkwardly' in 6 triggers a *graceful* contrast instead. The first claim seems like a true contrastive proposition and the second one seems false, which corresponds to the intuitive reading of the original cases. In short, the contrastivism on offer seems to be able to match intuition by tracing the contextual variation of causal claims to the contrasts involved in those claims.[12]

So, the CCT account that I have offered and the contrastive account from Schaffer can both track the contextual shifts across contexts or modes of representation and both can match intuition in the relevant cases. On this issue alone there is little to choose between the views.[13] Nevertheless, both

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[12]For the sake of brevity I do not rehearse the contrastive reading of the bike stealing case above. See Schaffer (2005) and Schaffer (2012) for the contrastive treatment of this and other examples.

[13]The defender of contrastivism will rightly point out that their claim to superiority over simple counterfactual analyses of causation is based on many more issues than just tracing the contextual variation—Schaffer, (2005) in particular argues that contrastivism can successfully resolve issues of absence causation and extensionality that I will not discuss here. Not all battles can be fought at once, however, and so I restrict myself to considerations of contextualism, transitivity and pre-emption in this paper.

Schaffer's view and my own require a coarse-grained, counterpart-theoretic treatment of events[14] and so the additional structure of the contrastivist approach, and the revisionary semantics that it demands, are not required in order to account for contextual shifts. Furthermore, Schaffer considers it a problem for his view that he must posit two contextual parameters in the semantics of causal claims (2012, p.56). The CCT view requires just one: the counterpart relation.

3 Transitivity

It is typical to assume that causation is a transitive relation. We think that doing something over here causes something to happen over there in virtue of a chain of intermediate happenings which transfer the causal mark: tipping the first domino in the run causes the last to fall, we might think. So natural is it to think that causation creates transitive chains that Hall, in his (2000, p.198), describes it as a "bedrock datum, one of the few indisputable a priori insights we have" concerning the concept of causation. And yet counterexamples to the apparent transitivity of causation abound. Here I aim to show that a familiar strategy for dealing with certain of these examples can be replicated by adopting a counterpart theory of events.

The transitivity thesis is straightforward:

> TRANSITIVITY If c is a cause of d and d is a cause of e, then c is a cause of e.

If TRANSITIVITY is to be true, there had better be no cases in which c causes d, and where d causes e, but where c does not cause e. However, it is examples purporting to have exactly that structure which have appeared in the literature. Here is one such example from Paul:

> While skiing, Suzy falls and breaks her right wrist. The next day, she writes a philosophy paper. Her right wrist is broken, so she writes the paper with her left hand[...] She writes the paper, sends it off to a journal, and it is subsequently published. Is Suzy's accident a cause of the publication of the paper?
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> Of course not. (Paul, 2000, p.205)

In this example it should be clear that Suzy's accident (c) causes her to write her paper with her left hand (d), and it is obvious that her writing

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[14]See Schaffer (2005).

that paper (d) caused it to be published (e). So, by transitivity, it ought to be the case that her accident (c) caused the paper to be published (e). Yet it is intuitively obvious that her accident did not cause the publication. Thus, this is a counterexample to the transitivity thesis.[15][16]

One response to such cases is to undermine the claim that c is *not* a cause of e. One might point out that intuition is doing a lot of heavy lifting and that it ought not to be trusted to give us the right answer across complex or lengthy causal chains. If intuition is not reliable then perhaps we ought not to let it wag the theoretical dog. I think such an approach is a non-starter, however. Not only is the example proposed entirely commonplace and intelligible, but more importantly intuition plays an indispensable role in our causal theorising. Denying an inconvenient intuition requires serious justification, and there appears to be little such justification here.[17]

A more promising response, versions of which can be found in both Paul (2000) and Schaffer (2005), is to challenge the notion that there is a single middle step in the causal chain. The thought is this: it is one thing to write something with your left hand, it is another to write that thing simpliciter. Paul argues that we should consider event *aspects* as the causal relata, and thus distinguish the writing aspect from the left-handed aspect in the causal story. On this view, the accident caused the left-handed aspect of the writing event, but not the writing aspect which was going to occur anyway. Similarly the writing aspect of the event, not the left-handed aspect of it, caused the paper to be published. Thus we have the accident (c) causing a left-handed aspect (d_1) and a writing aspect (d_2) causing the publication (e) but since the effect in the first step is not the same as the cause in the second (i.e. since $d_1 \neq d_2$) there is no genuine causal chain. If there is no causal chain, then the case simply does not qualify as a counterexample to TRANSITIVITY because that thesis only makes claims about cases where a chain does exist.

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[15]More examples with a near-identical structure can be found in McDermott (1995), Hall (2000), and Lewis (2004). I will stick to discussion of Paul's case for brevity.

[16]I will not discuss cases involving absences or double prevention here (see Hall (2000) for much discussed examples). Such cases are highly controversial given that they involve omissions as causes. Absence causation is a worthy topic in its own right (see Bernstein (2013) for a treatment using counterpart-theoretic events) but it would go beyond the scope of this paper to discuss it here. My aim is to show that counterpart-theoretic events can match the results claimed by Paul and Schaffer in the less controversial cases.

[17]For an illuminating discussion of the role of intuition in the philosophy of causation, see Hall (2007a). Note that this is a pre-print of the eventually published (2007b) but that the discussion in question only appears in the pre-print version. Hall (personal correspondence) considers the pre-print the official version as the published version was shortened due to space constraints.

The CCT view that I have introduced can match this result. The writing of the paper is represented as essentially left-handed in the first step—all of its counterparts are left-handed writings as that is the impact of the accident. In the second step, however, the writing could have been produced by either hand (or even by foot!) and still resulted in a publication, so the writing that results in publication is not essentially left-handed. Thus, the set of counterparts associated with the writing event shifts between the first step and the second: the accident (c) causes a left-handed writing (d_1), but the writing simpliciter (d_2) caused the paper to be published (e). As with Paul's response above, this means that there is no chain running from c to e and so there is no case to answer for the defender of TRANSITIVITY.

This strategy of disambiguating the middle-place is available only to those whose theory of events can distinguish d_1 from d_2. There was just one writing of the paper and so positing just one event fits with common sense. Both the aspect and counterpart theories are able to reflect this in a way that a fine-grain view of events cannot: d_1 and d_2 would need to be different events for a fine-grained strategy to be able to distinguish them. I take this to be an advantage of those theories over a fine-grained alternative. That said, I will make no claim here about the relative merits of the counterpart-theoretic approach and the aspects approach. Whilst I think there are important differences,[18] my claim here is merely that a counterpart-theoretic approach to events allows us to respond to these putative counterexamples to TRANSITIVITY just as well as the aspect theorist.

4 Pre-emption and Fragility

Pre-emption problems have plagued simple counterfactual theories of causation such as Lewis's and they are perhaps the main reason that few serious defenders of such theories remain. The problem cases have a deceptively simple structure: contrive a scenario where two intuitively unequal causal candidates are treated equally by Lewis's test. Since Lewis's analysis and intuition diverge, the analysis fails the test of intuition. In this section I will argue that CCT opens the door to a well known but much-maligned solution to certain pre-emption cases: the endorsement of *fragile events*.

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[18]See McDonnell (2015).

4.1 Late Pre-emption

There are several sub-species of pre-emption—early, late and trumping[19] varieties being the most prominent—each using the same basic structure but differing on the specific form of the causal asymmetry. I will focus on late pre-emption cases here, leaving early and trumping cases aside. A classic example:

8. Billy and Suzy are throwing rocks at a window. Suzy's rock reaches the window first, the window breaks, then Billy's rock passes through the void.

In this case it is obvious that Suzy is the cause of the window's breaking, and Billy is not. The presence of Billy, however, guarantees that the window would have broken even if Suzy had not thrown her rock. Billy thus undermines the counterfactual dependence of the window breaking effect on Suzy's throw. On a simple counterfactual account, Suzy is *not* a cause of the window breaking. So much the worse for the counterfactual account of causation.

4.2 Fragility Proposed and Rejected

It is tempting to offer the following response on counterfactual theorist's behalf: the window breaking event that *actually* took place occurred at one time, and the window breaking event that *would have* occurred had Suzy dropped the rock, would have taken place at a different time. As such there are two effects under consideration: the window breaking when it *actually* occurred, e, and the window breaking which *would have* occurred later, f. Having distinguished the effects thus, we can see that e *did* counterfactually depend on Suzy—without her throw *it* would not have occurred. It was a mistake to conflate e and f in the first place and it was this mistake which hid the counterfactual dependence relation between the window breaking effect and Suzy as the cause.

We may say that an event is *fragile* if and to the extent that alterations in timing or manner make it a new event. (In the language of counterparts, this amounts to having relatively few counterparts or a comparatively restricted essence.) The foregoing response to the pre-emption problem requires adopting a *fragile* view of events in order that e and f can be distinguished. But if we distinguish events so finely, we make them *too* fragile because they

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[19]Trumping cases (Schaffer, 2000) will be immune to the fragility response but are controversial—see McDeromott (2002) and Bernstein (2014).

would depend on a great many minor variations in their environment, many of which we would not ordinarily call causes. The window's breaking would not only depend upon Suzy, but it would also depend upon the dog that barked several streets away since the bark created a minor vibration in the window, without which it would be rendered a *different* event. It could even depend upon the trace gravitational influence exerted by Billy! Thus, Lewis's analysis, coupled with a fragile view of events, makes the dog's bark and Billy causes of the window breaking event. Worse still, if every minor influence on the effect was a cause of that effect, then even the doctor who struggled in vain to save the patient's life would be a cause of their death simply by intervening. On those terms, *Who would dare be a doctor*? (Lewis, 1986a, p.250) Lewis thought this was a *reductio* of the *fragile* view of events (1986d, p.196).

4.3   Fragility as Counterpart Variation

The cases of the doctor, of the dog's barking, and of Billy's gravitational influence are taken by Lewis as *spurious* causes that arise from a fragile view of events. However they only arise if the fragility applied is extreme—where literally *any* variation in timing or manner renders a new event—and if this extreme fragility is rigid across contexts. If the degree of fragility varies across contexts, however, then the issue of 'spurious' causes may not arise. Lewis recognises this in his (1986d, p.199) but says:

> To say how the double standard works may not be a hopeless project but for the present it is not so much unfinished as unbegun. (Lewis, 1986d, p.199)

Adopting a context-sensitive counterpart theory of events provides for just such a double standard. When the context triggers a counterpart relation which assigns relatively many counterparts for a given event, then that event is taken to be *robust*, and when the context triggers a counterpart relation in which the event has relatively few counterparts, then that event is taken to be fragile. So, the components of a double, or rather *fluctuating* standard are present in the CCT view offered here. What remains to be seen is whether there is something about the context of pre-emption cases in general that will justify the right level of fragility for the events in question so that the effect depends upon the cause without it also depending on every minor occurrence in the vicinity. I think that there is.

To show this, first consider this adapted version of the pre-emption setup:

9. Billy and Suzy are throwing rocks at a window. A rock reaches the window, the window breaks.

In this redacted version we are not told whose rock reaches the window first and so the intuition that Suzy is a cause, and that Billy is not, would not have formed if this had been all we were told. This suggests that our attribution of causal status to Suzy rather than Billy in the original case is sensitive to the information that Suzy's rock got there first. This is therefore a salient piece of contextual information that the counterpart theorist is entitled to incorporate into the modal profile of the events in question. Since we are not told how much sooner Suzy's arrived at the window than Billy's, we cannot use this to fix an absolute value for the set of counterparts that applies to the window breaking. No matter: if we are told that Billy's rock arrived x seconds after Suzy's, and that it arrived after the window broke, then we are entitled to view the window-breaking event as essentially having happened within an x seconds time period. This means that we are entitled to distinguish between the breaking that Suzy brought about and the breaking that Billy would have without requiring that the window breaking event be seen as *maximally* fragile. The specific resolution of x in any given case doesn't matter. What matters is the fact that the counterpart mechanism will be sensitive to this dimension regardless of the particulars of any given example. In other words, it is a general treatment for pre-emption cases which can tell pre-emptor and pre-empted apart without being committed to a maximally fragile view of the effect event in question.

To be a solution to the pre-emption problem, however, this treatment must also avoid the counter-intuitive attribution of causal status to the so-called 'spurious' causes, in this case the dog's bark or Billy's gravitational influence. Recall, though, that these counter-intuitive attributions were a result of having endorsed a *maximally* fragile view of events. If we take the event to be fragile enough to tell Billy and Suzy apart (as the original telling of the case justifies) but no more fragile than that requires, then the only other causes we will be committed to recognising are those that make just as much of a difference to the window breaking as Suzy did (i.e. those events upon which the moderately fragile window breaking also depends). *Ex hypothesi* the dog's bark and Billy's gravitational influence do not make that sort of contribution and so the moderate fragilicist need not count them as causes in any ordinary case. Whilst our physics tells us that these peripheral events make some contribution—and so there exists some possible context, however rarefied, in which they will be relevant factors—it is exactly that their contribution in the pre-emption context was irrelevant that made them

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'spurious'. The moderate fragilicist has the resources to match intuition in these cases by ruling Suzy in, and ruling Billy and the dog's bark out as causes.

There are outlandish cases, however, in which even the moderate fragilicist must say otherwise. Suppose that the difference between Suzy's rock and Billy's striking the window was so small as to require a quite extreme level of fragility (pico-second level perhaps) in order to render Suzy a cause and Billy not. At that level of fragility all manner of seemingly irrelevant factors will count as causes in virtue of the effect counterfactually depending upon their occurrence. In such a case the dog's bark and Billy's gravitational influence may indeed count as causes once again. Note, though, that for this result to be a problem for the view I have introduced it must be the case that our theory delivers a result which is in conflict with a clear-cut intuition. In cases where the dog's bark did make at least as much of a difference to the window breaking as Suzy did, where is the motivation for thinking of that event as causally irrelevant?[20] I suggest that any lingering intuition to this effect exists because of what Lewis described as 'false analogy' (1986d, p.194) with the earlier examples—a sort of intuition hangover from ordinary or familiar cases. In ordinary cases it makes sense to sideline such comparatively inconsequential factors, and a good causal theory will sideline them too. But when the case changes to render those factors genuinely consequential, a good causal theory had better keep step with that change regardless of whether intuition does too. As such, I take the theory on offer to provide the correct verdict in even these extreme cases.[21]

Most importantly though, in those commonplace cases in which we are to tell two vandals, snipers or poisoners apart, the counterpart-theoretic view of events, within the confines of a counterfactual theory of causation, matches intuition both in the events that it counts as causes *and* those which

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[20]In his later (2004) account of causation, Lewis took the position that such small influences could not be causes. I disagree. See Schaffer (2001) and (Strevens, 2003) for persuasive rebuttals of this notion.

[21]There is an interesting methodological issue lurking under the surface in this sort of debate. Lewis purported to be offering *pre-selective* account of causation: a highly liberal and inclusive account of causation intended to pick out *all* of the causes there are prior to our pragmatically selecting those which interest us (see (1986d, p.162)). It is not clear why anyone offering such a pre-selective account should worry if a host of typically *irrelevant* causes such as the dog's bark and Billy's gravity are counted, so long as the salient cause or causes are too. But plainly Lewis did think that counting 'spurious' causes was a problem for his theory, so perhaps the view of causation he was offering was not completely pre-selective after all. For the purposes of this paper I am simply aiming for what Lewis explicitly wanted which is to offer a theory which can match intuition in ordinary pre-emption cases.

it does not. This is a significant success.

5   The Fine-Grained Alternative Revisited

In §2.1 I discussed how the fine-grainer might account for the sort of context sensitivity we saw in the Susan and McEnroe examples. In those cases a fine-grainer would have to insist that the different modes of representation (i.e. 'serve' and 'awkward serve', or 'the stealing of the *bicycle*' and 'the *stealing* of the bicycle') picked out different events. I thought that this entailed an unpalatable over-counting of events as it stood but if the fine-grainer is to make use of the contextual clue about pre-emption cases that I have identified then they must now also distinguish the fragile and robust versions of the window's breaking as different events too. What is more, to be able to offer a general solution, they had better be willing to count as many different events as there are different degrees of fragility or robustness. This means that they must endorse fine-graining of events by time *as well as* by properties. I contest that what was problematic before has become more so by an order of magnitude.

Notice again that such a profusion of events is unnecessary. The solution that I have offered holds that causal claims are sensitive to context but that such sensitivity is traceable to a change in modality of the events in question, and *not* a change in which events are being discussed.[22] This CCT account treats the window breaking region as a single event, regardless of the context or the mode of representation whilst at the same time remaining sensitive to the semantic shifts that takes place under different representations. So, whether we are talking of the window breaking as fragile or as robust, we are nevertheless picking out the same actual occurrence, just as common sense would suggest.

I conclude from this that the coarse-grained, counterpart-theoretic view of events that I have endorsed can offer a contextualist solution to pre-emption cases without having to posit an implausible profusion of events in the actual world.

6   Conclusion

By adopting a counterpart theory of events I established the resources to track shifts in an implicit variable across contexts—shifts which I have ar-

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[22]The region of the actual world denoted by the event letter (c, d, e, etc.) remains fixed throughout.

gued track our shifting intuitions about the causal attributions that those events are involved in. I applied this framework to the apparent failure of transitivity cases and then showed that, when coupled with the contextual clues given in the set-up of pre-emption cases, this approach can be used to justify a particular reading of the events involved in those cases: a reading which yields intuition-matching results.

What has not been argued is that this is the only way to approach events, contextual variation, transitivity problems or late pre-emption problems. Nor has it been argued that such simple counterfactual accounts of causation as CCT are plausible overall. They may not be. Nevertheless, the lesson from this discussion is that counterpart-theoretic events can do some substantial work within a counterfactual theory of causation and that they can do so without recourse to the structurally complex contrastivist framework or to an implausibly fine conception of events. The project remains unfinished but it has, at last, begun.

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