A Defense of Causal Invariantism

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Abstract

Causal contextualism holds that sentences of the form ‘c causes e’ have context-sensitive truth-conditions. Jonathan Schaffer defends his brand of contextualism by contending that how one describes the relata of the causal relation sometimes affects the truth of one’s claim. We argue that this datum does not favor contextualism over invariantism. Second, Schaffer invokes the phenomenon of contrastive focus to conclude that causal statements implicitly designate salient alternatives to the cause and effect. We argue that focus selection is equally well explained by an invariantist approach. Finally, we consider Schaffer’s claim that the appropriateness of a causal statement depends on what is contextually taken for granted or made salient. We explain how invariantism can account for this context sensitivity, and argue that pace Schaffer, some causal sentences are always correct and can never be plausibly denied, regardless of the context. Hence, invariantism offers a better account of the linguistic data than Schaffer’s contextualism does.

Keywords: causation; contextualism; contrastivism; invariantism

1. Introduction

Causal contextualism holds that the truth-conditions of causal sentences of the form ‘c causes e’ (‘c is a cause of e’) and ‘c does not cause e’ (‘c is not a cause of e’) vary according to the context in which they are uttered—even when neither ‘c’ nor ‘e’ are themselves context-sensitive expressions. This means that keeping circumstances fixed, the same causal sentence can bear different truth-values in different contexts of utterance. According to causal invariantism, causal sentences such as ‘c causes e’ possess context-independent, or invariant, truth-conditions. We will argue that the data invoked by Jonathan Schaffer in support of contextualism can be explained within an invariantist framework that is supplemented by an appropriate pragmatic account. We will also argue that contextualism faces problems that invariantism avoids.

2. Contrastivism, Contextualism, and Invariantism
The term ‘contrastivism’ is sometimes used to refer to a version of contextualism. But we find it useful to reserve the term for a general conception of causation according to which causation is a matter of contrast, or difference making. David Lewis provides us with an informal characterization of this idea:

We think of a cause as something that makes a difference, and the difference it makes must be a difference from what would have happened without it. Had it been absent, its effects—some of them, at least, and usually all—would have been absent as well (1986, 160 – 161).

A contrastivist account of causation must incorporate contrast classes. But this leaves us with at least two options. One can hold, like the invariantist does, that the contrast classes are fixed solely by the way the world is, and in particular by the circumstances surrounding cause c and effect e. Or one can follow the contextualist and let the conversational context determine the contrast classes.

The debate we will engage in concerns mostly issues in the philosophy of language, since it is about the semantics of causal sentences. But this debate has direct metaphysical implications concerning the nature of causation. Schaffer argues that causation is a quaternary relation. According to him, there is no such thing as c causing e, simpliciter. Keeping all the facts the same, it may be that c rather than c₁ causes e rather than e₁, but that c rather than c₂ does not cause e rather than e₂. We defend the orthodoxy and hold that causation is binary. In other words, we think that the question ‘Does c cause e?’ can receive an answer independently of a conversational context. And this is because (modulo borderline cases) there is a fact of the matter about whether the binary causal relation obtains between c and e.

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1 See (Schaffer 2005, 2013) and (Northcott 2008).
Various forms of contextualism have been defended in the literature. Since we do not have the space to examine all of them, we cannot offer a full defense of causal invariantism here. Instead, we will confine our attention to Jonathan Schaffer’s (2005, 2013) brand of contextualism. According to Schaffer, sentences of the form ‘c causes e’ semantically express different propositions in different contexts. What shifts from one context to another are contrasts, where contrasts are salient alternatives to the cause and to the effect. More specifically, Schaffer defends the view he calls *Double-Contrasts*, according to which a claim of the form ‘c causes e’ expresses the proposition that c rather than c* causes e rather than e*.

This proposition is true iff (roughly) if c* had occurred then e* would have occurred (Schaffer 2005, 329). The contrasts c* and e* are unactualized events, and what contrasts an utterance of a causal sentence expresses depends on the questions structuring the causal inquiry and the alternatives explicitly or implicitly evoked by the conversational participants. When one says, ‘c causes e,’ one speaks elliptically and relies on context to supply the two implicit relata c* and e*.

We disagree and hold that utterances of the form ‘c causes e’ invoke no such implicit references to contrasts. Our brand of invariantism is inspired by Lewis’s (2004a) latest counterfactual theory according to which causation is defined in terms of chains of stepwise influence, and James Woodward’s (2003) interventionist theory where causes are understood as handles or devices for manipulating their effects. Both theories are contrastive: c is a cause of e just in case changes in c are correlated with changes in e, given that appropriate other factors are

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2 See (Menzies 2004, 2007), (Hitchcock 2007), (Hall 2007), and (Halpern and Pearl 2005) for forms of contextualism according to which causation is relative to a model. See (Northcott 2008) and (Maslen 2004) for versions of contextualism similar to Schaffer’s (2005, 2013).

3 Schaffer appeals to a set $C^*$ of contrasts for the cause and a set $E^*$ of contrasts for the effect, but we will ignore this complication. Schaffer is also open to *Total-Contrasts*, which “adds to Double-Contrasts a further relativity to contrasts for events under consideration other than cause or effect” (2013, 47).
held fixed. A more specific yet still approximate statement of our view is as follows: where \( c \) and \( e \) are distinct events, ‘\( c \) causes \( e \)’ is true iff (roughly) (i) both \( c \) and \( e \) occur and (ii) \( (\exists c^*)(\exists e^*)(c^* \text{ is a relevant alteration of } c \& \text{ if } c^* \text{ had occurred, } e^* \text{ would have occurred} \& e^* \neq e) \).

These approximate truth-conditions deserve some comments.

According to the first conjunct in (ii), \( c^* \) must be a relevant alteration of the putative cause \( c \). The alterations of an event are non-actual possible alternatives to that event. What Schaffer calls a ‘contrast’ we call an ‘alteration.’ We make this terminological choice for two reasons. First, in many respects, our view follows Lewis’s (2004a). But our notion of alteration does not exactly match his. For Lewis, an alteration of event \( E \) is “either a very fragile version of \( E \) or else a very fragile alternative event which may be similar to \( E \), but is numerically different from \( E \)” (2004a, 88). But as we shall use the term, there is no implication that an alteration is modally fragile, that is, that it could not occur in a different manner or at a different time from its actual manner and time of occurrence. Moreover, while Lewis allows some alterations to be actual events, we stipulate that an alteration is non-actual. Second, our terminological choice also signals our disagreement with Schaffer. According to his contextualist framework, contrasts are fixed by the conversational context. But on our view, which alterations are relevant depends merely on the circumstances surrounding \( c \) and \( e \).

But, more specifically, what makes an alteration of a putative cause relevant? We take this question to be equivalent to Woodward’s (2003, 86 – 91) question about what counts as a

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4 See (Hitchcock 2001, 369) for a similar view.
5 See (Lewis 1986, 255 – 258) on the requirement of distinctness.
6 We construe ‘\( c \) causes \( e \)’ broadly and take it to be equivalent to locutions such as ‘\( c \) is a cause of \( e \),’ ‘\( c \) is among the causes of \( e \),’ and ‘\( c \) caused \( e \).’ However, the latter oftentimes suggests a discriminatory causal notion that is also expressed by the locution ‘\( c \) is the cause of \( e \).’ Except when we quote others, we will avoid ‘\( c \) caused \( e \).’
serious possibility.\textsuperscript{7} We will tackle this complex issue in two steps. First, we hold that the complete elimination of an event is always a relevant alteration of that event. Furthermore, all alterations “in between” the occurrence of an event and its non-occurrence are also relevant. For example, relevant alterations of the event consisting in the lacing of Victim’s coffee with 10 mg of poison include: the lacing of Victim’s coffee with 9 mg of poison, the lacing of Victim’s coffee with 8 mg of poison, etc., as well as the non-poisoning of Victim’s coffee.\textsuperscript{8} Relevant alterations also include events that occur at slightly different times or manners than the actual event.\textsuperscript{9}

But for reasons that will become clear when we discuss cases of causation by omission, the set of relevant alterations includes more than what we have just mentioned. In Section 7, we will present the second part of our account of what a relevant alteration is. Following a number of authors,\textsuperscript{10} we will argue that relevance also depends on norms, including statistical, functional, as well as social, moral and prudential norms. Hence, what makes an alteration relevant depends not only on the objective features of the circumstances surrounding c and e, but also on human-dependent considerations such as our expectations about what is normal. However, the fact that relevance depends on human interests does not make relevance context sensitive. Our contention is that the interests in question are general, context-independent human interests, as they apply to the actual circumstances surrounding c and e, rather than the particular interests of the

\textsuperscript{7} Technically, Woodward’s notion of a serious possibility serves as a criterion for including or excluding specific variables in a causal model. However, since a variable in a causal model is standardly understood to represent the occurrence or non-occurrence of an event, depending on its value, our idea of a relevant alteration connects in a natural way with Woodward’s notion of serious possibility.

\textsuperscript{8} Note that this condition does not always apply: there may not be any alteration in between flipping a switch and not flipping it, for example.

\textsuperscript{9} This first part of our account of relevance is very similar to what Lewis (2004a, 90 – 91) proposes, except that Lewis does not hold that the complete elimination of an event is always relevant.

\textsuperscript{10} Here, we split company with (Lewis 2004a) and instead get our inspiration from (Halpern and Hitchcock forthcoming), (McGrath 2005) and (Woodward 2003).
conversational participants discussing those circumstances. The best way to evaluate this contention is to see how it fares with respect to the various cases invoked by contextualists. This is what we propose to do in this paper, focusing on the cases discussed by Schaffer.

The truth-conditions of ‘c causes e’ are satisfied only when at least one relevant alteration of c counterfactually entails a significantly different alteration of e. This is captured by the conjunct ‘e* ≠ e,’ where ‘≠’ should be interpreted as ‘is significantly different from.’¹¹ The requirement that e* be significantly different from e is meant to avoid so-called spurious causes. Suppose Suzy throws a rock at an empty bottle and it shatters. As Lewis (2004a) points out, by the law of gravitation, a distant planet affects very slightly the trajectory of the rock and thus makes a minute difference in the shattering of the bottle. However, like Lewis, we hold that this influence is not significant enough to make the planet’s gravitational field a cause of the shattering of the bottle.

To illustrate our truth-conditions, consider a paradigmatic case of causation. Assassin puts a sufficient amount of lethal poison into Victim’s coffee. Victim drinks it and dies.

(1) Assassin’s poisoning of the coffee causes Victim’s death.

The circumstances surrounding Assassin’s poisoning of the coffee and Victim’s death fix the class of relevant alterations. One relevant alteration of Assassin’s poisoning of the coffee, for example, is his refraining from doing so, and Victim’s surviving is a significantly different alteration of his dying. On our proposed truth-conditions, (1) is true because had Assassin refrained from poisoning the coffee, Victim would have survived. Here, it is understood that when we evaluate this counterfactual, factors such as the proper functioning of Victim’s digestive system are held fixed. In other words, worlds in which relevant alterations of the cause

¹¹ There is no need to include the conjunct ‘c* ≠ c’ in the truth conditions: the only condition on c* is that c* be a relevant alteration of c.
occur are worlds in which the functioning of Victim’s digestive system is the same as it is in the actual world. The antecedent of the counterfactual ‘if c* had occurred, e* would have occurred’ thus describes a possible world in which no outside factor is independently altered.12

3. Further Preliminary Remarks

Before we begin our discussion of Schaffer’s arguments in favor of contextualism, we need to make several preliminary clarifications.

A. Context and Circumstances. Some discussions of contextualism tend to confuse the circumstances surrounding the cause and effect and the conversational context of the speakers discussing those circumstances. Consider the “two assassins puzzle,” imagined by Christopher Hitchcock: “Two assassins, Captain and Assistant, are on a mission to kill Victim. Upon spotting Victim, Captain yells ‘fire!,’ and Assistant fires. Overhearing the order, victim ducks and survives unscathed” (2003, 10). As Hitchcock points out, there is no clear intuition about the truth-value of

(2) Captain’s yelling of ‘Fire!’ is a cause of Victim’s survival.

Robert Northcott (2008) argues that by adding details to the scenario, our intuition about (2) can be sharpened. He considers two ways to do so. In the first case, Captain and Assistant are stalking Victim in a congested marketplace. Victim is being carried away by the crowd. If Captain and Assistant do not act quickly, Victim will be out of range and survive. Unfortunately, Captain and Assistant become separated and lose visual contact. Captain is forced to yell ‘Fire!’ in order to have any chance of killing Victim. The yell alerts Victim, who ducks and survives. Northcott writes that (2) is intuitively false in this case, since “even if Captain had not yelled still Victim would have got away in any case” (2008, 113). In the second case, there is no crowd

12 Woodward’s (2003, 74 – 86) discussion of what he calls actual causation is especially clear on this point.
carrying Victim away. Captain and Assistant have plenty of time to set up for the kill as they are on a balcony overlooking Victim in the marketplace. According to their plan, when Captain silently lifts his finger, Assistant is to fire on Victim. However, just before he lifts his finger, Captain impulsively yells ‘Fire!’ This alerts Victim, who then ducks and survives. Northcott holds that (2) is intuitively true in this case, since “this time the yell made all the difference” (2008, 113).

We do not dispute Northcott’s intuition about the two cases. However, contrary to what he contends, the cases offer no support for contextualism. As Asbjørn Steglich-Petersen points out, “The details added to the two assassins case […] do not provide us with clear causal intuitions by virtue of ‘subtle contextual cues’ […] but simply by virtue of providing details about the scenario that are relevant to whether [2] is true” (2012, 134). Northcott elicits different intuitions about (2) by varying the circumstances surrounding the alleged cause and effect. But invariantism is perfectly compatible with the fact that a causal sentence such as (2) may be true in some circumstances and false in others. A good argument for causal contextualism should appeal to variations in intuitive truth-values that are affected solely by variations in the conversational context. The circumstances under discussion in the different contexts should be kept the same.

B. Vagueness. The truth-conditions of ‘c causes e’ are vague. In some circumstances, it may be indeterminate whether c causes e, because it may be indeterminate whether the alterations of e counterfactually entailed by the relevant alterations of c are “different enough,” or whether the alterations of c that counterfactually entail significantly different alterations of e are relevant. Now, like Lewis and many others, we favor a brand of contextualism about vagueness.¹³ This

¹³ See (Raffman 1994), (Shapiro 2006) and (Soames 1999), among others. For reasons of space, we cannot offer a full defense of this controversial view and will simply take it for granted here.
means that causal statements, like all other statements involving vague terms, give rise to a kind of context sensitivity: when the sentence ‘c causes e’ has an indeterminate truth-value due to vagueness, that is, when c is a borderline cause of e, one can truly utter that sentence, or truly deny it, without contravening its conventional meaning. As Lewis puts it, we are “within our linguistic rights to go either way” (2004a, 89, 102-3). But clearly, as Schaffer (2013, 60, n. 4) acknowledges, this context sensitivity is due solely to vagueness, and has nothing to do with causal sentences as such.

C. Small Changes. Earlier, we remarked that alterations involving only small changes in an actual event are always included in the set of relevant alterations. Such an inclusion may appear useless. If the complete elimination of c does not counterfactually entail something significantly different than e, then surely a small change in c will not either. But this is not always the case. Consider a simple—and admittedly boring—video game we will call Precision. This game involves a series of red lights that are sequentially illuminated in a circular pattern. When the lights have completed one full rotation, a green light is illuminated. This light stays on for 0.1 seconds after the first rotation. It is not illuminated after subsequent rotations. To move to the next level, a player must press the button while the green light is on. If she does not press the button during that period of time, she loses the game. Suppose Player presses the button at time t. Unfortunately, t is 0.05 seconds too late, and Player loses. Intuitively, Player’s pressing of the button at t is a cause of Player’s losing. Now, if Player had not pressed the button at all, Player would have lost. Hence, the complete elimination of Player’s pressing of the button at t does not counterfactually entail anything different than Player’s losing. As a matter of fact, only small alterations of Player’s pressing of the button at t, such as Player’s pressing of the button at t – 0.1 seconds, counterfactually entail Player’s moving to the next level—something significantly
different than Player’s losing. Thus, in order to deliver the correct verdict in this case, alterations involving only small changes in the cause must be deemed relevant.

D. Perfect and Imperfect Nominals. As should already be clear, we are solely concerned with event causation. We remain neutral about other types of causation, such as fact causation. This means that we should avoid causal sentences involving imperfect nominals such as ‘Socrates’s drinking the hemlock.’ This nominal is imperfect because in it the gerund ‘drinking’ bears many of the marks of a verb. For example, it has a direct object, it can be modified by tenses (‘Socrates’s having drunk the hemlock’) or modalities (‘Socrates’s having to drink the hemlock’), and it should be modified by an adverb rather than an adjective (‘Socrates’s reluctantly drinking the hemlock’). For this reason, Zeno Vendler (1967) and Jonathan Bennett (1988, 2002) argue, imperfect nominals denote facts rather than events. As Bennett puts it, “the phrase ‘the event of his answering her’ […] is not English but philosophers’ pidgin” (2002, 52). Our focus should thus be on sentences containing perfect nominals such as ‘Socrates’s drinking of the hemlock,’ which clearly denote events. Often, the use of imperfect nominals to denote events does not affect the philosophical point one is making, and we will not systematically quibble with such usage here. However, as we will see in the next Section, one particular contextualist argument is considerably less powerful once perfect nominals are substituted for imperfect ones in the causal sentences under consideration.

E. Other Issues. Our proposed analysis does not entail that causation is transitive, since counterfactual dependence is not transitive. To restore transitivity, causation could be defined as a chain of counterfactual dependencies, as Lewis (2004a) suggests. But we will leave this difficult question aside. This means that we will not discuss Maslen’s (2004) and Schaffer’s

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14 In ‘Socrates’s drinking of the hemlock,’ ‘drinking’ is a noun that should be modified by an adjective; it cannot be modified by tenses or modalities; and it is completed by a genitive rather than a direct object.
arguments for causal contextualism based on puzzles about transitivity. We will also leave out of consideration the issue of probabilistic causation. Eventually, we acknowledge that our truth-conditions would need to be revised to accommodate cases of overdetermination, preemption, and trumping. Fortunately, it will not be necessary to do so here, since Schaffer’s arguments do not rest on such cases.

It is now time to look at the data invoked by Schaffer in support of his view. In the next Section we examine how the particular descriptions of causal relata affect the appropriateness of a causal statement. In Section 5, we explore the phenomenon of contrastive focus and how it influences the acceptability of causal claims. Finally, in Sections 6 and 7, we assess the contextualist’s claim that whether a causal sentence can be correctly uttered varies from context to context.

4. Event Descriptions

In preparation to serve the ball, McEnroe suddenly becomes tense. His serve turns out to be awkward. Consider:

(3) McEnroe’s tension caused him to serve awkwardly.

(4) McEnroe’s tension caused him to serve.

(3) is acceptable but (4) is not. But if the nominals in (3) and (4) name the same events, then how are we to explain the variation in acceptability?

The contextualist answer is that even though the event nominals denote the same effect, the propositions (3) and (4) express are different. This is because, Schaffer (2005, 338; 2013, 50-51) contends, the different descriptions of the effect invite different contrasts: while ‘to serve

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15 See (Hitchcock 1996) for an argument for contextualism based on probabilistic causation.
16 This example is from (McDermott 1995, 540).
awkwardly’ invites a contrast such as ‘to serve gracefully,’ ‘to serve’ invites a contrast such as ‘to stand still.’ Thus, (3) expresses the proposition:

(3a) McEnroe’s being tense rather than calm caused him to serve awkwardly rather than gracefully.

(4), on the other hand, should be interpreted as:

(4a) McEnroe’s being tense rather than calm caused him to serve rather than stand still.

The fact that (3a) is true explains our positive reaction to (3), while the falsity of (4a) accounts for our negative response to (4).

One immediate problem with this case is that the infinitive clauses in (3) and (4) are imperfect nominals. The verb ‘to serve’ can be modified by tenses or modalities, it can have a direct object, and it should be modified by an adverb rather than an adjective. Therefore, nominals in (3) and (4) denote facts rather than events. Since our focus is on event causation, the putative effects of McEnroe’s tension should be described by perfect nominals, as in:

(5) McEnroe’s tension causes his awkward serve.

(6) McEnroe’s tension causes his serve.

It is worth noting that the intuition that (5) and (6) have different truth-values is clearly weaker than the intuition that the truth-values of (3) and (4) differ. Schaffer’s proposed interpretations become:

(5a) McEnroe’s tension rather than his calm causes his awkward serve rather than his graceful serve.

(6a) McEnroe’s tension rather than calm causes his serve rather than his standing still.

But one wonders why (5) should be interpreted as (5a) instead of:
(5b) McEnroe’s tension rather than his calm causes his awkward serve rather than his graceful standing still (or some graceful activity other than a serve).

In other words, in specifying the contrast to the effect, should we replace only the noun, as in (6a), only the adjective if there is one, as in (5a), or both the adjective and the noun, as in (5b).

This question matters, because (5a) and (5b) do not have the same truth-conditions on Schaffer’s account. (5a) is true just in case McEnroe would have served gracefully had he been calm. And (5b) is true just in case McEnroe would have gracefully stood still (or gracefully done something other than serve) if he had been calm.

Because he takes (5) to be intuitively true, Schaffer wants (5a) to be the correct interpretation of (5). But why is that? Schaffer may insist that only the adjective—when a nominal contains one—should be modified in specifying the contrast. But this suggestion has unfortunate consequences. Consider:

(7) Assassin’s poisoning of the coffee causes Victim’s painful death.

Assuming that Victim’s death was indeed painful, (7) seems true. But on the current proposal, (7) would express the false proposition:

(7a) Assassin’s poisoning of the coffee rather than his sweetening of the coffee (or some act other than poisoning) causes Victim’s painful death rather than his painless death.

We do not see any reason to hold that (5a) is the “natural” interpretation of (5), while denying that (7a) is the “natural” interpretation of (7): the locution ‘painful death’ invites the contrast ‘painless death’ just as much as the locution ‘awkward serve’ invites the contrast ‘graceful serve.’

It is thus far from clear that there is a non-arbitrary way for Schaffer to yield the right truth-conditions in cases such as (5) and (7).
Schaffer’s treatment of the case may suggest that the interpretations of (5) and (6) are fixed by how the causes and effects are described. But this cannot be the whole story. As a contextualist, he is committed to holding that (5) and (6) have context-sensitive interpretations, depending on which contrasts are contextually salient. In a context in which McEnroe’s calm and graceful serve are the salient alternatives to his tension and awkward serve respectively, (5) expresses the true proposition (5a). But in a context in which the salient alternatives are McEnroe’s calm and his graceful standing still, (5) expresses the false proposition (5b). (6) should be treated similarly. In a context in which the salient alternatives to McEnroe’s tension and his serve are McEnroe’s calm and his standing still, (6) expresses the false proposition (6a). But if the salient alternatives were McEnroe’s heart attack and his quitting the match, (6) would express the true proposition:

(6b) McEnroe’s tension rather than his heart attack causes his serve rather than his quitting the match.

This point matters: although (5) seems more appropriate than (6), Schaffer must grant that there are contexts in which (5) may be truly denied, and contexts in which (6) may be truly denied. This does not necessarily mean that Schaffer lacks the resources to explain the difference in intuitions between (5) and (6): he may contend that (5) sounds better than (6), because in typical contexts, (5) and (6) are interpreted as expressing (5a) and (6a) respectively. But our previous point is worth reiterating: Schaffer needs to explain why a sentence such as (7), which is structurally similar to (5), is not also typically interpreted as expressing (7a). Schaffer’s account of the data is thus at best incomplete.

Like Schaffer, we hold that (5) and (6) have context-sensitive truth-values, but for very different reasons. Let us start with (6). McEnroe’s tension clearly affects his serve, but does it
affect it enough to count as a cause? Eliminating his tension would not eliminate his serve; it would only make it less awkward and more graceful. McEnroe’s tension can thus be said to contribute to the manner of the serve. Perhaps this is enough to make (6) true, but we are not sure. In fact, we are inclined to hold that (6) has an indeterminate truth-value, because McEnroe’s tension is a borderline cause of his serve. In other words, it is indeterminate whether any of the alterations of McEnroe’s serve counterfactually entailed by the relevant alterations of McEnroe’s tension are ‘significantly different.’ Since, for reasons we will present shortly, we favor a coarse-grained individuation of events, we must hold that (5) also has an indeterminate truth-value due to vagueness. Now, in Section 3, we signaled our agreement with Lewis’s contention that when a sentence has an indeterminate truth-value due to vagueness, one can truly utter it or truly deny it, without violating its conventional meaning. Our view can thus do justice to speakers’ inclination to accept (5), since (5) can be truly uttered in some contexts. We can also respect speakers’ rejection of (6), since (6) can be truly denied in some contexts.

One may object that this is too quick, for surely, we can truly utter (5) and deny (6), in the very same context. Can we? An utterance of ‘McEnroe’s tension causes his awkward serve, but it does not cause his serve’ sounds odd to us. Hence, one who is prepared to utter (5) should be prepared to utter (6) as well. There are thus contexts in which (6) can be truly uttered. Like Schaffer, then, we hold that the truth-values of (5) and (6) vary according to the context. Our views are thus very close in this respect.17 But we saw that Schaffer might have the resources to explain why (5) seems more acceptable than (6). On our view, we will now explain, this difference is a pragmatic effect. James Woodward writes that causal claims are typically associated with causal generalizations. For example, speakers who utter ‘The short circuit caused

17 We say ‘very close’ rather than ‘identical,’ since we disagree about the source of context sensitivity and the contextual factors that affect truth-values.
the fire' are typically “committed to counterfactuals of the form […] ‘If a short circuit were to occur in any one of a range of different background circumstances, then in those circumstances a fire will sometimes occur’” (2003, 215). As Woodward points out, such counterfactuals are rather weak. They merely hold that events of the type ‘short circuit’ sometimes cause events of the type ‘fire,’ at least in circumstances similar to the ones causal utterances of ‘The short circuit caused the fire’ are about. The counterfactuals are compatible with the fact that there are many possible causes of fires. Crucially, Woodward (ibid., 214) holds that the causal generalization associated with a causal claim should be regarded not as a condition on its truth, but as merely contributing to its explanatory import.

Woodward’s remarks can help explain the difference between (5) and (6). Speakers are hesitant to utter (6) because (6) is associated with the false generalization ‘Tensions sometimes cause serves.’ By contrast, an utterance of (5) poses no such problem, because it is the case that tensions sometimes cause awkward serves—at least during tennis matches. Now, Woodward does not say much about the nature of this ‘association’ between the causal claim and its related generalization. We think that this association is an instance of pragmatic presupposition. A pragmatic presupposition associated with a sentence is a condition that someone uttering the sentence would typically assume to hold. A sentence of the form ‘S doesn’t know that P,’ for example, is associated with the pragmatic presupposition that P is true (when S is someone other than the speaker). If Paula were to say, ‘Felipe doesn’t know the meeting starts at 3pm,’ she would be understood as presupposing that the meeting starts at 3pm. But this presupposition is

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18 See (Bennett 1988, 111-112) and (Davidson 1967) for similar remarks.
19 See, among others, (Stalnaker 1973). Why not hold that the causal generalization is an implicature instead? An implicature is part of what a speaker means, that is, what the speaker intends to communicate. By contrast, speakers do not (typically) intend to communicate what is presupposed by their utterances. Now, it does not seem that people who utter ‘The short circuit caused the fire’ typically intend to communicate that short circuits sometimes cause fires; they merely take for granted that they do.
not a condition on the truth of her claim, for that claim would be true if the meeting did not start
at 3pm. Now the crucial point, for our purposes, is that the utterance of a true sentence associated
with a false presupposition may sound unacceptable. Consider:

(8) Homer does not know that the earth is flat.

Although (8) is clearly true (no one can know something that is false!), it sounds terrible. We
believe that the unacceptability of (6) can be explained similarly: although one may make a true
utterance of (6), such an utterance seems unacceptable, because it pragmatically presupposes
something false, namely that tensions sometimes cause serves (in tennis matches).

We conclude that the issues raised by variations in events descriptions do not favor
Schaffer’s contextualism over our brand of invariantism. Before we move on to Schaffer’s next
argument, an alternative invariantist response is worth considering. Our treatment of the
McEnroe case involves a number of complex and, we concede, controversial moves. One might
point out that none of these moves would be needed if we simply endorsed a fine-grained
account of events. Such an account would allow us to hold that (5) and (6) have different truth-
values, because McEnroe’s awkward serve and his serve are different events. So it is worth
explaining why we do not favor such a view. Consider:

(9) McEnroe’s serve causes the crowd’s disappointment.

(10) McEnroe’s awkward serve causes the crowd’s disappointment.

Both (9) and (10) are intuitively true. And on our coarse-grained view, they are both true (and
not indeterminate).\textsuperscript{20} McEnroe’s graceful serve is in both cases a relevant alteration of the

\textsuperscript{20} Furthermore, both (9) and (10) are associated with true generalizations: serves (and \textit{a fortiori} awkward
serves) sometimes cause people’s disappointment (in tennis matches).
cause, the occurrence of which counterfactually entails an event significantly different than the crowd’s disappointment. How would the fine-grained theorist approach this case? She may insist that contrary to intuition, (9) is false. Since the crowd would not have been disappointed by a non-awkward serve, it is the awkward serve rather than the serve that causes the crowd’s disappointment. But suppose that McEnroe’s awkward serve was only moderately awkward; if it had been extremely awkward, the crowd would have been amused rather than disappointed. This means that according to the fine-grained theorist’s response, it is the moderately awkward serve, rather than the awkward serve, that causes the crowd’s disappointment. So (10) is also false. But the problem does not stop here. Suppose further that if McEnroe, a left-handed player, had decided to serve with his right hand, his serve would also have been awkward; however, it would have caused puzzlement rather than disappointment. Hence, it is really the moderately awkward left-handed serve that causes the crowd’s disappointment. But it is far from clear that we have identified what causes the crowd’s disappointment, since there are plausibly many other features of the serve that were crucial to the crowd’s reaction. Hence, on a fine-grained view of events, most of our ordinary causal statements are false, because we fail to identify what specifically causes an event. As a matter of fact, it is in many cases practically impossible to identify causes, since we are rarely in a position to figure out the specific features of a cause that are responsible for the effect. For these reasons, we are disinclined to adopt a fine-grained individuation of events.

5. Contrastive Focus

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21 This is because it is statistically normal for McEnroe to serve gracefully. As we will explain in Section 7, statistical normality is one of a number of additional factors that determines what alterations are relevant.

22 See (Dowe 2010) for a similar point.
Another example discussed by Schaffer (2005, 337-338; 2013, 40, 49) concerns what Dretske (1972) calls contrastive focus. Socrates willingly drinks the hemlock at noon, and soon dies. Consider:

(11) Socrates’s drinking of the hemlock at noon caused his death.

(12) Socrates’s drinking of the hemlock at noon caused his death.23

On a coarse-grained view, the nominals ‘Socrates’s drinking of the hemlock at noon’ and ‘Socrates’s drinking of the hemlock at noon’ denote the same event. But then, what explains the variation in our judgments of acceptability between (11) and (12)? According to contextualism, different contrasts are selected, depending on where the focus is placed in the utterance. Schaffer (2013, 49) writes that (11) expresses:

(11a) Socrates’s drinking of the hemlock rather than wine (or some other salient alternative to his drinking of the hemlock) at noon caused his death,

while (12) expresses:

(12a) Socrates’s drinking of the hemlock at noon rather than dusk (or some other salient time) caused his death.

Hence, we judge (11) acceptable because a speaker who utters it asserts that the substance that Socrates drank made a difference to whether he died. (12) is deemed unacceptable, because in uttering it one asserts that the time at which Socrates drank made a difference to whether he died.

Focus effects are quite diverse,24 and it is highly unlikely that a single account can explain them all. The phenomenon Schaffer invokes here is usually called ‘association with focus.’25 In cases of association with focus, the placement of focus in the sentence has truth-conditional effects: keeping the circumstances fixed, (11) and (12) seem to have different truth

23 The example is from (Achinstein 1975).
24 See (Glanzberg 2005) for a useful overview.
25 See, for instance, (Jackendoff 1972) and (Rooth 1985).
conditions. Because of that, many have expressed doubts that association with focus is a purely pragmatic effect. Although we do not hold that all instances of association with focus can be explained pragmatically, we think that some can. It is highly plausible that each of sentences (13) – (15) expresses a complete proposition, independently of the context. However, with judicious placement of focus, each can give rise to similar truth-conditional effects as (11) and (12).

(13) Torturing an innocent person at noon is immoral.\textsuperscript{26}

(13a) Torturing an \textit{innocent person} at noon is immoral.

(13b) Torturing an innocent \textit{person at noon} is immoral.

(14) In the UK, driving on the right at noon is illegal.

(14a) In the UK, driving \textit{on the right} at noon is illegal.

(14b) In the UK, driving on the right \textit{at noon} is illegal.

(15) A nugget of gold extracted at noon has atomic number 79.

(15a) A nugget of \textit{gold} extracted at noon has atomic number 79.

(15b) A nugget of gold extracted \textit{at noon} has atomic number 79.

Now, it is extremely plausible that the truth-conditional effects in (13) – (15)—i.e., the differences in intuitive truth-values between the a- and b-statements—are merely pragmatic. And since the effects in (11) and (12) are very similar, they are also plausibly pragmatic rather than semantic. In each case, we would argue, the impression of falsehood resulting from stressing ‘at noon’ can be explained by the generation of a false, pragmatically conveyed content. (13b), for example, pragmatically conveys that there are times other than noon at which torturing an innocent person is not immoral. The causal invariantist can explain the intuition that (12) is false.

\textsuperscript{26} Some authors (Harman 1996; Unger 1995) hold that moral judgments involve tacit references to moral standards or theories. For this reason, they would argue, (13) fails to express a complete proposition. However, on this view, a sentence such as ‘According to commonsense morality, torturing an innocent person at noon is immoral’ would possess context-independent truth conditions. And such a sentence would exhibit the same kind of truth-conditional effects as those displayed in (13a) and (13b).
in the same way. 27 (11) and (12) semantically express the same proposition, namely that Socrates’s drinking of the hemlock at noon caused his death. This proposition is true, because there is a relevant alteration of the cause, namely, Socrates’s abstaining from drinking anything, the occurrence of which counterfactually entails survival. However, an utterance of (12) pragmatically conveys that there are times other than noon at which Socrates’s drinking of the hemlock would not have caused his death. It is worth noting that this pragmatically conveyed content is cancellable. To an utterance of (12), one can add, ‘But of course, his drinking hemlock at any other time would still have killed him,’ without contradiction. 28

What is the pragmatic process involved in (12) and (13b) – (15b)? It is tempting to hold that these utterances generate false implicatures. Speakers sometimes mistake the falsity of a sentence with the falsity of the implicature generated by the utterance of that sentence. Appealing to implicatures can thus be a successful way to explain why an utterance of a true sentence appears false. However, appeal to implicatures cannot explain cases where the denial of a true sentence seems true. If all students passed the test, an utterance of

(16) Some students passed the test

may seem false. This is because an utterance of (16) generates the implicature that not all students passed the test. However, in this case, it would clearly be incorrect to deny (16), that is, to utter ‘No student passed the test.’ This reinforces the view that ‘Not all students passed the test’ is implicated rather than semantically entailed by (16). Hence, in cases where the generation of a

27 Unlike Steglich-Petersen (2012, 127-128), who also defends causal invariantism, we do not hold that focus makes (11) and (12) semantically incomplete.
28 We do not hold that cancellability favors our account over the contextualist’s, though. Sentences of the form ‘S is tall’ are commonly taken to have context-sensitive truth conditions, because they require the provision of a comparison class in order to express a complete proposition. However, in a context in which the class of professional basketball players is salient, one can say, without contradiction, ‘Malik is tall. Of course, he’s shorter than a typical professional basketball player. However, he’s significantly taller than the average American.’ Similarly, the causal contextualist should admit that speakers can cancel the inclusion of some salient events as contrasts in their causal statements.
false implicature explains why an utterance of a true sentence appears to be false, that same sentence cannot be truly denied.\footnote{As DeRose puts it, it seems “problematic to claim that an assertion that seems true is in fact false by means of a claim that, though the assertion itself is false, it generates a true implicature and is therefore a warranted assertion” (2002, 192).}

Now, the problem with explaining the apparent falsehood of (12) and (13b) – (15b) in terms of implicatures is that (12) and (13b) – (15b) can be appropriately denied. For example, an utterance of ‘It’s not that in the UK, driving on the right \textit{at noon} is illegal; it’s driving on the right that’s illegal!’ sounds fine. And so does ‘It’s not his drinking of the hemlock \textit{at noon} that caused Socrates’s death; it’s his drinking of the hemlock!’.

Fortunately, there is another pragmatic process that can help explain why a denial of (12) appears true. Consider:

(17) Roger is not going to die.

In a typical context, (17) would be used to convey something different than what it literally means, that is, an expansion, or conceptually enriched version, of the proposition determined by the conventional meaning of (17).\footnote{The term ‘expansion’ is Bach’s (1994, 2001). Carston (2002) and Recanati (2004) call this process \textit{free enrichment}.} In uttering (17), a speaker may mean that Roger is not going to die \textit{from his scraped knee}.\footnote{Some may hold that the sentence (17) contains a hidden indexical for time (and maybe another for cause). We find this position implausible, but a proper treatment of this complex issue would be beyond the scope of this paper.} Here are some other examples, with possible expansions within brackets:

(18) She went to the gym [to work out].

(19) He took out his key and [then] opened the door [with the key].

(20) The [customer who ordered the] ham sandwich is getting impatient.
As Kent Bach (1994, 140) points out, expansions are cancellable. Furthermore, appealing to expansion can not only explain why an utterance of a true sentence appears to be false, but it can also explain why a true sentence can be appropriately denied. The sentence ‘Roger is going to die’ is true—Roger is mortal. However, in a context in which the speakers’ attention is on Roger’s scraped knee, an utterance of that true sentence would be deemed false, since it would be understood to convey that Roger is going to die from his scraped knee. Moreover, an utterance of ‘Roger is not going to die’ in the same context would appear true.

Let us now examine how this applies to (12). Such an utterance pragmatically conveys that

(12b) Socrates’s drinking of the hemlock at noon as opposed to some other time caused his death.

The intuitive truth-conditions of (12b) can be captured in terms of the truth-conditions of binary causal sentences: (12b) is true just in case Socrates’s drinking of the hemlock at noon caused his death and there is some other time at which Socrates’s drinking of the hemlock would not have caused his death. Because the second conjunct is false, (12b) is false. Furthermore, a denial of (12) would pragmatically convey:

(12c) It is not the case that Socrates’s drinking of the hemlock at noon as opposed to some other relevant time caused his death.

(12c) is true if and only if it is not the case that Socrates’s drinking of the hemlock at noon caused his death while there is some other time at which Socrates’s drinking of the hemlock would not have caused his death. (12c) is thus true. There is thus an adequate pragmatic account

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32 We leave it as an exercise for the reader to figure out how a similar treatment of (10b)-(12b) would look.
of the intuitive truth conditions of (12), as well as its denial, that does not force us to give up our invariantist semantics.

6. Selection and Alternatives

A lightning storm is followed by a forest fire. Nevertheless, given that fire cannot occur without oxygen, it seems to follow that

(21) The presence of oxygen caused there to be a forest fire.33

But imagine a group of forest rangers primarily concerned with figuring out what caused the forest fire. These forest rangers would find an utterance of (21) unacceptable. However, things would be different from the point of view of Hilary Putnam’s Venusians: “Imagine that Venusians land on earth and observe a forest fire. One of them says, ‘I know what caused that—the atmosphere of the darned planet is saturated with oxygen’” (1982, 150). The acceptability of an utterance of (21) thus depends on the context.

As Schaffer (2013, 41) acknowledges, there is a straightforward invariantist explanation for the unacceptability of an utterance of (21) in the first context: the forest rangers are presupposing that oxygen is present, and wondering about how the fire started. So citing the presence of oxygen as a cause fails to speak to the question under discussion, and thus violates the maxim of relation (‘Be relevant’). Furthermore, an utterance of (21) is arguably inappropriate because it is uninformative, given that the forest rangers already know that oxygen is needed for fire. There is nothing unusual or ad hoc about these explanations. As Lewis points out, “There are ever so many reasons why it might be inappropriate to say something true. It might be irrelevant to the conversation, it might convey a false hint, it might be known already to all

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33 See (Schaffer 2013, 37).
concerned, and so on” (2004a, 101). Hence, the fact that an utterance of (21) may, in some contexts, be frowned upon by one’s interlocutors does not entail that it is false.34

There are two other sources of discomfort regarding (21). First, we are assuming that the forest rangers are looking for “the” cause of the fire. As we noted earlier,35 the locution ‘c caused e’ is sometimes used to convey something equivalent to ‘c was the cause of e.’ But it is well known that what counts as “the” cause of an event depends on many context-sensitive factors:

We sometimes single out one among all the causes of some event and call it ‘the’ cause, as if there were no others. Or we single out a few as the ‘causes’, calling the rest mere ‘causal factors’ or ‘causal conditions’… We may select the abnormal or extraordinary causes, or those under human control, or those we deem good or bad, or just those we want to talk about (Lewis 1986, 162).36

But this context sensitivity is irrelevant here: our dispute with contextualists concerns sentences of the form ‘c causes e’ (or ‘c is a cause of e’) rather than sentences of the form ‘c is the cause of e.’ Like Lewis, we are “concerned with the prior question of what it is to be one of the causes” (ibid., 162). And the rangers would (very likely) not find fault with the sentence ‘The presence of the oxygen was a cause of the forest fire.’ Again, given their purpose, they would find it pointless to utter such a sentence; however, we seriously doubt they would deem the sentence false. The second source of discomfort about (21) has to do with the fact that ordinary speakers are typically reluctant to describe a standing or background condition such as the presence of oxygen as the cause of an event, or even what caused an event. But from this we should not conclude that a standing cause is not a cause.

Let us now examine how Schaffer proposes to account for the context sensitivity of the acceptability of (21). He writes:

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34 See also (Swanson 2010) for interesting remarks about why some true causal sentences may not be appropriately uttered in some contexts.
35 See footnote 6.
36 See also (Bennett 1995, 133) and (Mackie 1974, 35).
The question is why the Venusians naturally promote the presence of oxygen to the status of a cause while the forest rangers naturally demote the presence of oxygen to the status of a mere background condition. A natural first thought is that, for the Venusians, there is a salient alternative to the presence of oxygen: the absence of oxygen. But for the forest rangers no alternative to the presence of oxygen is salient. For the forest rangers the presence of oxygen is simply presupposed (2013, 52).

Hence, in the conversation among Venusians, an utterance of (21) expresses the true proposition:

(21a) The presence rather than the absence of oxygen caused there to be a forest fire rather than no fire.

The absence of oxygen is part of the proposition expressed by (21), because it is a salient contrast. However, an utterance of (21) by a forest ranger would not express (21a), because the forest rangers recognize no salient contrast to the presence of oxygen. Hence, according to Schaffer, such an utterance expresses a false proposition. What proposition? As Schaffer (2013, 52) admits, there is no obvious answer to this question. His view also entails that the denial of (21) would be true, if made by the forest rangers, but Schaffer concedes that he is not in a position to offer any interpretation for such a denial. Our own view, as we stated above, is that a denial of (21) would be false, and an utterance of (21) true, regardless of the context. This is because there is a relevant alteration of the presence of oxygen, namely the absence of oxygen, and were that alteration to occur, no forest fire would occur.

We think there are further reasons to prefer our explanation to Schaffer’s. We will present them in Section 7. But before we do that, we need to examine another pair of cases discussed by Schaffer (2013, 38-40, 50-51). Suppose there are three switches on a train track. If the switch is set to *broken* the train will take the leftmost track and suffer a derailing. If the switch is set to *local* the train will take the middle track and arrive slowly at the station. Finally,
if the switch is set to *express* the train will take the rightmost track and arrive quickly at the station. Now consider:

(22) The switch’s getting set to *local* caused the passengers to arrive at the station.

Schaffer (2013, 38) claims that the truth of (22) depends on the contrasts speakers have in mind. He writes,

> We can imagine a conversation in which the background assumption is that the switch is set to *broken*, and we are wondering why disaster was averted. In such a context, [22] would be acceptable […] After all, if we were expecting the train to derail, learning that the switch got set to *local* should help us understand why things went otherwise. Yet, if we imagine a context in which the background assumption is that the switch should be set to *express* (and leaving it on *broken* is not under consideration), then an utterance of [22] should be unacceptable. After all, in such a context we were already expecting the passengers to arrive at the station. The switch’s getting set to *local* makes no difference (2013, 39).

Schaffer’s descriptions suggest that the circumstances surrounding the switch and the train change from the first case to the second. The fact that speakers are expecting the train to derail in the first case, while in the second case they are expecting the passengers to arrive at the station, suggests that the facts being discussed change from one case to the other.\(^\text{37}\) If this is so, then Schaffer’s pair of cases is problematic in the same way that Northcott’s assassin cases, discussed in Section 3, are. The fact that the intuitive truth-value of ‘c causes e’ changes when the circumstances surrounding c and e change does not entail that ‘c causes e’ has context-sensitive truth-conditions.

Alternatively, it could be that the circumstances in the two cases are identical, but that the speakers’ understanding of those circumstances (based on their assumptions and expectations) is not the same in the two conversational contexts. But this would not support contextualism either, since it would merely show that how speakers perceive a given situation affects what causal sentences they hold true, a trivial point that invariantists can accept. According to contextualism,

\(^{37}\) This is how Steglich-Petersen (2012, 131-132) construes the two cases.
speakers in different contexts assess the same sentence differently, not because they believe different things about the situation described by the sentence, but because they do not interpret the sentence in the same way.

We thus need to assume not only that the facts are kept the same from one case to the other, but that the speakers in the two contexts do not misapprehend those facts. Now, it is not entirely clear what the facts are. According to Schaffer’s description of the first case, the switch is initially set to *broken*, and then gets set to *local*. We find it hard to see how anyone would deny (22) if these are the facts. Clearly, the switch’s getting set to *local* made a difference: if the move from *broken* to *local* had not been performed, the train would not have arrived at the station.\(^{38}\) We do not think that the intuition of truth would be diminished in a conversational context in which it is pointed out that the train would also have arrived at the station if the switch had been set to *express*, or that it would have been a better idea to set the switch to *express*, since in such a case the train would have reached the station more quickly.

But there are other possible construals of the facts. Schaffer’s description of the second case suggests that (for some unspecified reason) the only two admissible settings of the switch are *local* and *express*: the switch was not initially set to *broken*, and setting the switch to *broken* is not “under consideration.” If these are the facts, then (22) is arguably false. Our verdict is tentative here, since we are not clear on what the fact that a setting of the switch to *broken* is not “under consideration” amounts to. But if this means that the switch’s getting set to *broken* is a very remote possibility, then our view can straightforwardly explain why (22) seems false in this case, for the switch’s getting set to *broken* would not be a relevant alteration of the switch’s being set to *local*. We realize that this interpretation contradicts what we just said about the first

\(^{38}\) On our view, the switch’s being set to *broken* is a relevant alteration of the switch’s getting set to *local*, since the former is what results from an elimination of the latter.
case in the previous paragraph. But this means either that (i) the different intuitions about the truth-value of (22) are elicited by varying the facts about the situation under discussion, in which case no support for contextualism is offered, or that (ii) the facts under discussion are kept the same and fit either the current interpretation or the one proposed in previous paragraph, in which case no difference in intuitive truth-value is generated between the two contexts.

7. Salient vs. Relevant Contrast

Schaffer’s mistake, in our view, is to let contextual salience determine the contrasts. We think there are good reasons to resist this determination. First, there is the problem, acknowledged by Schaffer, that in many contexts there just do not seem to be any salient contrasts. He writes:

> For instance, imagine that the king has eaten soup and died, and that the question under discussion is whether there is any connection between these events. In such a context, the occurrences of both the candidate cause and effect events are presupposed. It seems as if alternatives are not being queried as to what the king ate, or what fate he suffered. The alternatives being queried are of the wrong sort entirely to provide either of the contrasts needed (2013, 56).

In this example, it seems that an utterance of

> (23) The king’s eating of the soup caused his death

would automatically have to be deemed false, simply because it is taken for granted that both cause and effect occurred. One might respond that some alternatives to the king’s eating of the soup, such as the king’s not eating the soup, would naturally come to the minds of conversational participants. And since the king’s not eating the soup counterfactually entails something other than death, the intuitive truth of (23) can be respected. But this move is not available to Schaffer, given what he says about the forest fire case discussed in the previous Section. According to Schaffer, a forest ranger cannot truly utter (21) (‘The presence of oxygen caused there to be a forest fire’) because “no alternative to the presence of oxygen is salient. For the forest rangers the presence of oxygen is simply presupposed” (2013, 52). Schaffer cannot coherently make this
point and contend that (23) is true despite the fact that “no alternative to the king’s eating of the soup is salient.” 39 This raises serious doubts about Schaffer’s claim concerning the role of salient contrasts.

We now propose to explore these problems further by considering first some causal claims that seem unacceptable, regardless of the context. Like Schaffer, we think that causal sentences involving negative nominals, such as

(24) The gardener’s not watering my flowers is a cause of the wilting of my flowers, can be true. Causal claims involving negative event nominals have sometimes been thought to undermine the position that causation is always a relation between events (Lewis 2004b; Beebee 2004). Some even argue that such claims show that causation is a relation between facts rather than events (Mellor 2004). However, following Schaffer (2005), we hold that negative event nominals denote actual events. Hence, the nominal ‘the gardener’s not watering my flowers’ denotes whatever activity the gardener was performing—say, his binge-watching some TV show—instead of watering my flowers. On our contrastive account, the truth of (24) does not commit us to the existence of a physical process connecting an omission to the wilting of flowers. (24) is true because the gardener’s watering of my flowers is a relevant alteration of his watching TV, and had that alteration occurred, my flowers would not have wilted.

Now, consider:

(25) The Queen of England’s not watering my flowers is a cause of the wilting of my flowers.

39 Another problem with the proposed alternative is that some natural contrasts to the king’s eating of the soup, such as the king’s drinking/nibbling/devouring of the soup, do not counterfactually entail something other than death. It is also far from obvious that “natural” contrasts are really context sensitive. Our contention would be that “natural” contrasts are really what we call relevant alterations. We recognize that we are not in a position to prove this contention, but none of the cases we have looked at here has threatened it.
Unlike (24), (25) seems false. To respect this intuition, we need to hold that her watering my flowers is not a relevant alteration of whatever the Queen was doing while my flowers were wilting, say, her reigning on her throne. We thus need to supplement the account of relevant alterations we have relied on so far.

To account for cases of causation by omission, Sarah McGrath (2005) appeals to the notion of the normal. What is normal, she writes, depends on standards that govern what things are “supposed to do.” As McGrath emphasizes, standards form a very diverse, heterogeneous category. Laws of nature and statistical generalizations are standards governing the natural and social world. One can truly say, ‘The absence of rain in June caused the grass to turn yellow,’ if rain in June is statistically normal. Artifacts and biological systems are also governed by norms of proper functioning. One may truly say, ‘Kathy’s alarm clock’s not ringing caused her late arrival,’ because when they function properly, alarm clocks ring at the set time (McGrath ibid., 138). For the same kind of reason, one may correctly say, ‘The heart failure caused the patient’s death.’ Finally, what is normal may be fixed by social, moral or prudential norms. This is the sense of normal that affects the truth-values of (24) and (25). (24) is true, because my gardener has a contractual obligation to water my flowers. By contrast, the Queen’s watering of my flowers is not a relevant alteration, for there is no standard by which she is supposed to water my flowers. This is why (25) is false.

Generally speaking, an alteration is relevant if it would obtain in virtue of some norm or other. And the norm in question may be statistical, functional, social, moral or prudential. It is worth saying a little more about social, moral and prudential norms. The normative relations at work here are better understood as reasons rather than obligations or requirements. Unlike obligations, reasons are pro tanto, that is, they can be outweighed by other considerations. Hence, 

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40 See also (Halpern and Hitchcock forthcoming) for a similar proposal.
one may have a reason to perform an action without having an obligation to do so, if one has a stronger reason to do something else instead. The fact that I enjoy my flowers gives me a (prudential) reason to water them. But this reason may be outweighed by other considerations. Suppose I learn that my mother, who lives in another town, just fell sick and is in need of my help. In such a case, my reason to leave home and take care of my mother is stronger than my reason to stay home and water my flowers. Yet, the following claim seems true in this case:

(26) My not watering my flowers is a cause of the wilting of my flowers.

In our view, (26) is true because I have a reason (but certainly no obligation) to water my flowers. (25), on the other hand, is false because the Queen has no reason to water my flowers.

This example allows us to address a potential concern. A given situation typically involves many different kinds of norms. One might suggest that when these norms conflict, the conversational context determines which one is operative.41 But this suggestion is implausible. The intuition that (26) is true remains strong even in contexts in which the focus is on the reasons I have for taking care of my mother rather than my flowers. To repeat, on our view, an alteration is relevant if it would obtain in virtue of some norm or other.42 Hence, our appeal to norms does not invite a context-sensitive account of causation.

Let us now examine Schaffer’s explanation for the unacceptability of (25). In a context in which the Queen’s watering of my flowers is a salient contrast, an utterance of (25) would express the true proposition

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41 See (Halpern and Hitchcock forthcoming) for such a suggestion, which is criticized by Blanchard and Schaffer (forthcoming). For the latter, what is taken to be normal is relevant not to the facts of actual causation, but to our background biases of cognitive performance.
42 McGrath (2005, 140) makes the same point.
33

(25a) The Queen of England’s not watering my flowers rather than watering them is a cause of the wilting of my flowers rather than their blossoming.\(^{43}\)

Schaffer proposes to explain the unacceptability of (25) *pragmatically*: we resist taking the unrealistic supposition that the Queen would deign to water my flowers as a contrast. Schaffer’s view seems to be that in some contexts, an utterance of (25) would be strictly speaking true; however, we would reject it because we would take the contrast it expresses as too far-fetched. We find this account doubtful, given how robust the intuition of falsehood is.\(^{44}\) But a simpler and more appealing contextualist response is worth considering. A contextualist could hold that relevance operates as a constraint on the admissibility of a salient contrast. More specifically, if a contrast is not relevant (according to our invariantist account of relevance), then it cannot enter into the proposition expressed by a causal sentence, even if that contrast is salient. Hence, all salience would do is select, among the relevant contrasts, which ones are involved in the proposition expressed by a causal sentence. According to this response, no utterance of (25) would be true, because the Queen’s watering of my flowers is not a relevant contrast and can thus not be part of the proposition expressed by an utterance of (25).

Unfortunately, this response does not address all the counterintuitive consequences of the contextualist account. Some causal sentences are such that denying them is unacceptable, regardless of the context. This is a problem for Schaffer’s contextualism, because on his view any (binary) causal sentence is such that it can be truly denied in some appropriately constructed

\(^{43}\) Schaffer’s (2005, 332) interpretation is a little different, because he treats negative nominals as denoting actual events. Assuming that the Queen was reigning on her throne while my flowers wilted, an utterance of (25) would express the true proposition:

(25b) The Queen of England’s reigning on her throne rather than watering my flowers is a cause of their wilting rather than blossoming.

\(^{44}\) Steglich-Petersen gives other examples of highly dubious causal claims that Schaffer seems committed to accepting: “Susan scratching her nose rather than spontaneously vaporizing caused her arrest, as long as Susan wouldn’t have been arrested if she had spontaneously vaporized, even if the actual nose scratching had nothing to do with her arrest” (2012, 122).
context. We will consider two types of cases: cases in which the occurrence of c is presupposed and there are thus no salient contrasts for c; and cases in which the salient contrasts for c do not make any difference with respect to e. In both cases, contextualism entails that the claim ‘c is not a cause of e’ should be accepted.

Consider again the conversational context involving Putnam’s Venusians. They find an utterance of (21) (‘The presence of oxygen caused there to be a forest fire’) acceptable, because it informs them of a feature of the earth’s atmosphere that is causally responsible for the occurrence of fire. But suppose now that our Venusians already know that a lightning strike occurred: no alternative to such a strike is salient. As Schaffer would put it, the Venusians are “presupposing that a lightning strike occurred.” It would thus seem pointless for them to utter:

(27) A lightning strike was a cause of the fire.

But surely, they would not regard (27) as false. Or to put it differently, the Venusians would not be tempted to deny (27). Not recognizing any salient alternative to the lightning strike would lead them to investigate, what else, other than lightning, was a cause of the fire; but it would not lead them to deny that a lightning strike was a cause of the fire. However, Schaffer’s view implausibly entails that this is what the Venusians would do. Such examples are easily multiplied. Recall our example (in Section 2) of Suzy throwing a rock that shatters a bottle. According to Schaffer’s contextualism, there should be contexts in which the salient contrasts are such that the sentence ‘Suzy’s rock throw is not a cause of the shattering of the bottle’ can be truly uttered. But this is highly dubious.

Let us now examine a case where the salient contrasts for the causal event do not make any difference with respect to the effect. Consider again the poisoning example discussed in Section 2, and suppose that we focus on the fact that for a while Assassin considered putting a
“double dose” of poison, that is, 10 mg, in Victim’s coffee instead of the “single,” 5 mg, dose he actually used. This is the only salient contrast for the cause. But we all know that both options would have killed Victim. Suppose further that one of us remarks that it would be nice if Victim were still with us. So Victim’s surviving is the salient contrast for the effect. However, in such a context, we would not in the least be tempted to utter

(28) Assassin’s putting 5 mg of poison into Victim’s coffee is not a cause of Victim’s death.

This spells trouble for Schaffer, for his view entails that an utterance of (28), made in the context we just described, would express the true proposition

(28a) Assassin’s putting 5 mg of poison into Victim’s coffee rather than 10 mg is not a cause of Victim’s death rather than survival.

We have examined two types of counterintuitive causal denials. In one, the occurrence of c is taken for granted, and no alternative to c is considered. In the other, the only salient alternatives c* to c are such that their occurrence would make no difference with respect to e. In both cases, an utterance of ‘c is a cause of e’ is highly plausible, and it is highly implausible to utter ‘c is not a cause of e.’ The problem is that contextualists such as Schaffer are forced to reject these intuitions. It is thus wrong to hold, like Schaffer does, that non-salient alternatives are irrelevant to the evaluation of causal sentences.

8. Conclusion

We have examined three types of data invoked by Schaffer in support of his brand of contextualism. He argues that the descriptions of the causal relata one chooses affect the plausibility of one’s causal claim. But as we saw, this argument appeals to the wrong kind of causal sentences, that is, sentences involving imperfect nominals. When the causal relata are denoted by perfect nominals instead, the data actually does not favor contextualism over
invariantism. Second, Schaffer invokes the phenomenon of contrastive focus to argue that all causal statements implicitly designate salient alternatives to the cause and effect. We showed how this phenomenon can be offered a pragmatic explanation compatible with an invariantist semantics. Finally, we looked into Schaffer’s claim that the appropriateness of some causal statements vary from context to context, depending on what the speakers take for granted or make salient. We indicated four sources of inappropriateness invariantists can invoke. We then argued that contrary to what Schaffer’s contextualism entails, there are causal sentences that are always correct and can never be plausibly denied, regardless of the context. We conclude that invariantism offers a better semantics of causal sentences than Schaffer’s contextualism does.

**Bibliography**


