

## A DEFENSE OF THE CONTRASTIVE THEORY OF CAUSATION

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**SUMMARY:** An argument proposed by Steglich-Petersen (2012) establishes that while contrastive causation can be applied to general causation and causal explanation, it is a mistake to consider it in cases of singular causation. I attempt to show that there is no mistake. Steglich-Petersen's argument does not seem to be strong enough and is actually circular. Furthermore, I briefly argue that even if we take his argument to be valid, there is still a response from the side of contrastive causation.

**KEY WORDS:** contrastivism, counterfactual conditional, general causation, singular causation, causal claim

**RESUMEN:** Un argumento que Steglich-Petersen (2012) propone establece que si bien es posible aplicar una noción contrastiva de la causación a casos de causación general y de explicación causal, es un error considerarla en casos de causación singular. Intentaré mostrar que no existe dicho error. El argumento de Steglich-Petersen no parece ser lo suficientemente fuerte y es, de hecho, circular. Además, argumentaré brevemente que aunque asumiéramos que su argumento fuera válido, seguiría habiendo una respuesta desde el punto de vista de la teoría contrastiva de la causación.

**PALABRAS CLAVE:** contrastivismo, condicional contrafáctico, causación general, causación singular, enunciado causal

### 1. *Contrastive Causation*

Steglich-Petersen argues that the contrastive theory of causation fails to handle cases of singular causation, i.e. cases involving singular events instead of event types. In order to show how his argument proceeds, I am going to explain first what the theory in question establishes. One of the first accounts of contrastive causation was provided by Dretske (1977) and it has been discussed more recently by other authors (Hitchcock 1996; Schaffer 2005; Northcott 2008). The main idea of the contrastive theory of causation is the following (Steglich-Petersen 2012, p. 117):

- (1) *Contrastive causation:* Binary causal claims of the form “*A* caused *B*” are semantically incomplete and should be analysed as causal claims involving relevant contrasts or sets of contrasts.

Steglich-Petersen considers the following example to show the incompleteness of binary causal claims:

- (2) Susan stealing the bicycle caused her arrest.

This binary statement is semantically incomplete, because it can refer to different alternatives, which have the form of contrastive causal claims:

- (3) Susan stealing the bicycle rather than purchasing it caused her arrest.
- (4) Susan stealing the bicycle rather than stealing something else caused her arrest.

While in proposition 3 the contrast is made in relation with the stealing, in proposition 4 it is made about the bicycle. Contrasts to effects will not be considered in the present discussion, because these are not involved in Steglich-Petersen's argument against the contrastive account of causation. According to the contrastive view of causation, truth conditions of proposition 2 may vary, as one may expect considering the propositions where the contrasts are made explicit. A contrastive theory of singular causation analyses the causal relation in the following way, where  $A$ ,  $A^*$  and  $B$  are descriptions of singular events:

- (5) " $A$  rather than  $A^*$  caused  $B$ " is true if and only if, had  $A^*$  happened instead of  $A$ ,  $B$  would not have happened.

On the other hand, the counterfactual account of causation is a good example of a theory focused on the analysis of binary causal statements:

- (6) " $A$  caused  $B$ " is true if and only if, had  $A$  not happened,  $B$  would not have happened.

The first clear counterfactual account of causation was presented by Lewis (1973) and is the subject of recent discussion (Collins et al. 2004; Spohn 2006; Huber 2011). The meaning of contrastive causal claims and binary causal claims seem to differ only with regard to their simplicity. Steglich-Petersen argues that the truth condition of a binary causal claim, called the *primary counterfactual*, is based on another counterfactual conditional, the *secondary counterfactual*, whose antecedent describes what happens in the nearest world instead of  $A$ , which explains why  $B$  does not occur. Despite the benefits and clarity of the contrastive account of singular causation, Steglich-Petersen denies it to be adequate. The truth-value of a contrastive causal claim may depend on a certain secondary counterfactual as well, which would show that there is nothing special on the contrastive account of singular causation. His argument is based on the following (p. 122):

- (7) If proposition 5 were true, it would not be relevant what  $A^*$  is, but only what would have happened to  $B$ , had  $A^*$  happened.
- (8) But *it is relevant* what would have happened rather than  $A$ , i.e. it is relevant what  $A^*$  is.
- (9) Proposition 7 is false.

The basic idea is that the contrastive account for singular causation is wrong because it is committed to the claim that whether a certain contrast to the cause is the event that would have happened instead of the cause, had the cause not occurred, is irrelevant to whether the cause is indeed the cause of the effect, as long as the effect doesn't happen in the world in which the specified contrast happens. Steglich-Petersen argues that it is relevant to the truth-value of a contrastive causal claim what would have occurred instead of the cause. In this sense, there would be no important difference between the truth conditions of binary causal claims and contrastive causal claims. For its simplicity, the binary account of causation would be preferable.

## 2. "It Is Not A Knockdown Argument"

It is important to understand proposition 7 and how it is denied by Steglich-Petersen. Let us consider the following example. Susan stealing the bicycle rather than purchasing it caused her arrest. According to the contrastive account of causation, the claim is true because Susan would not have been arrested, if she had purchased the bicycle. But it is also true that she would not have been arrested, if she had, for instance, borrowed the bicycle. It seems to be irrelevant whether Susan would have purchased the bicycle or whether she would have borrowed it, if she had not stolen it. What really matters is whether she would have been arrested or not, if she had borrowed it. This would admit strange cases like the following:

- (10) Susan stealing the bicycle rather than spontaneously disappearing caused her arrest.

The irrelevance about what occurs to the cause might admit cases in which events that do not seem to be relevant are involved. Steglich-Petersen considers a possible response from the contrastivist (p. 122): Proposition 10 is true, but it might seem irrelevant or inappropriate in most conversational contexts.

Steglich-Petersen admits that one cannot show that sentences like (10) are false and considers another argument, describing the following case:

- (11) Susan stealing the bicycle rather than purchasing it caused her arrest. If she had not stolen the bicycle, she would not have purchased it, but instead stolen the skis.

Note that sentence 10 plays a fully different role in Steglich-Petersen's argument than the sentences in (11). On one hand, sentence 10 might be true, although the contrast considered seems to be irrelevant. On the other hand, proposition 11 is considered to be false. The second sentence in (11), i.e. the secondary counterfactual, contradicts, according to Steglich-Petersen, the first sentence in (11). This should show that it really *does* matter what the alternatives of Susan's action are and, moreover, that those alternatives must be the ones that in fact would have occurred instead of the relevant cause, had the cause not occurred (p. 123). The contradiction in (11) seems to be based on the following:

- (12) If Susan had not stolen the bicycle, she would have purchased it. If she had not stolen the bicycle, she would not have purchased it, but instead stolen the skis.

According to Steglich-Petersen, the first statement in proposition 12 is the secondary counterfactual that follows from the first statement in proposition 11 (p. 123). That is, "Susan stealing the bicycle rather than purchasing it caused her arrest" implies "If Susan had not stolen the bicycle, she would have purchased it." I think that this is wrong. Steglich-Petersen is at this point introducing the relevance by establishing that implication, which is supported by the following principle, where " $\Box \rightarrow$ " stands for the counterfactual connective:

- (13) For any events  $A$ ,  $A^*$  and  $B$ : ( $A$  rather than  $A^*$  caused  $B$ ) entails ( $\neg A \Box \rightarrow A^*$ )

He admits that this is not a knockdown argument against singularist contrastive causation (p. 125). In what follows, I will stick to his acknowledgement and show why it is a weak argument. In the next section, I pretend also to explain that, even if the argument was valid under some version of (13), its conclusions do not show that the contrastive account of singular causation is wrong.

Here is one of the first general problems of Steglich-Petersen's argument. The contradiction only arises if we accept proposition 13, so the argument to show that secondary counterfactuals are in fact relevant to the truth-value of contrastive causal claims presupposes that some secondary counterfactual is implied by the contrastive

causal claim under evaluation. Proposition 13 establishes already that what happens instead of the cause is relevant. The argument is not a knockdown simply because it presupposes what it wants to conclude.

Here is another problem. Proposition 13 is simply not true. Contrastive causal claims are less demanding than what is determined in it. Such claims only describe what would have happened, if something different than the assumed cause had occurred. They do not describe what the alternative of the cause would have been, if the assumed cause had not occurred. Such information can be obtained only with further assumptions, i.e. it depends on the context of the situation whether the considered contrast would have occurred if the considered cause had not occurred. In the case of (11), this additional information is the fact that Susan would not have purchased the bicycle, if she had not stolen it, but she would have stolen the skis. Let me clarify the point by describing two different cases in which Susan steals a bicycle:

*Bet:* Susan is a frequent bicycle rider and participates once in a while in small races organized by a group of neighbours. She made a huge bet for today's race: if she loses the race, she loses her apartment. Unfortunately, Susan noticed this morning that her bicycle has a damage that is impossible to repair before the race. If she had the money, she would buy a new bicycle. Given the circumstances, it would be worth it. But she does not have the money. She cannot borrow a bicycle either, because everyone she knows that could help her will also participate in the race. So she impulsively decides to go stealing a bicycle to the next sports shop. She gets arrested after doing it.

Consider now the following scenario, which is also discussed by Steglich-Petersen (p. 130):

*Kleptomaniac:* Susan is a kleptomaniac with a particular urge to steal large items. Today, she walks into a sports shop and steals a bicycle. She gets arrested moments later.

In the case involving the bet, we may say that Susan stealing the bicycle rather than purchasing it caused her arrest and that if she would not have stolen it, she would have purchased it. The binary causal claim is also true: Susan stealing the bicycle caused her arrest.

The case of the kleptomaniac is a version of (11) and is a counterexample to principle 13. Although in this case it seems true to say that Susan stealing the bicycle rather than purchasing it caused her arrest, we may assume that Susan would have stolen something

else, if she had not stolen the bicycle. Similarly, we can hold (11) to be consistent under the conditions of this case. As Steglich-Petersen correctly claims, it may not be true in the kleptomaniac case that Susan stealing the bicycle (in particular) caused her arrest. However, it is true that Susan stealing the bicycle rather than purchasing it caused her arrest.

### 3. *For The Sake of Argument*

I will briefly argue in this section that, even if the argument proposed by Steglich-Petersen were accepted as valid, it does not show that the contrastive theory of singular causation is wrong.

Let us suppose, for the sake of the argument, that it is relevant to the evaluation of a contrastive causal claim what would have happened, if the actual cause had not occurred. For instance, the fact that Susan is a kleptomaniac might help us to stipulate, in that context, what would have occurred if she had not stolen the bicycle. That does not mean that such an assumption is needed in order to establish the truth-value of the contrastive causal claim “Susan stealing the bicycle rather than purchasing it caused her arrest”. It might be relevant in order to judge whether the claim is appropriate in the given context. But it is still wholly irrelevant to the truth-value of the considered claim. Thus, the irrelevance of secondary counterfactuals may be formulated as follows:

*Irrelevance of secondary counterfactuals:* The truth-value of a contrastive causal claim does not depend on the truth value of any secondary counterfactual associated with that claim.

The following is a statement about the relevance of secondary counterfactuals regarding the adequacy of the causal claim:

- (14) The adequacy of a contrastive causal claim might depend on the truth-value of some secondary counterfactual associated with that claim.

It should be clear that proposition 14 does not contradict the principle of irrelevance of secondary counterfactuals. Then, accepting the importance of further information involving a secondary counterfactual does not mean that one should deny such principle, as Steglich-Petersen claims (p. 124). Steglich-Petersen’s discussion is compatible with statement 14. Even assuming the validity of his argument in this sense, it does not follow that the contrastive account of singular causation is wrong.

#### 4. Conclusion

I tried to show here that, first, the argument presented by Steglich-Petersen against the contrastive theory of singular causation is weak and circular, mainly because the contradiction it pretends to show follows from what he is trying to conclude. Secondly, I briefly argued that even if one ignores the argument's weakness, there is still a plausible answer that defends the contrastivist point of view.

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