

Absence and Abnormality

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Abstract

Absences pose a dilemma for theories of causation. Allowing them to be causes seems to make theories too permissive (Lewis, 2000). Banning them from being causes seems to make theories too restrictive (Schaffer, 2000, 2004). An increasingly popular approach to this dilemma is to acknowledge that norms can affect which absences count as causes (e.g., Thomson, 2003; McGrath, 2005; Henne et al., 2017; Willemsen, 2018). In this article, I distinguish between two influential implementations of such ‘abnormality’ approaches and argue that so-called ‘double-prevention mechanisms’ provide counterexamples against both.

Keywords: Causation, Normativity, Absence, Omission, Norm, Counterfactual Dependence, Abnormality

1 Introduction

Absences pose a dilemma for theories of causation. Allowing them to be causes seems to make theories too permissive (Lewis, 2000). Banning them from being causes seems to make theories too restrictive (Schaffer, 2000, 2004). McGrath’s (2005) ‘normal proposal’ aims to solve the dilemma by demanding that causal absences have corresponding presences that are normal preventers of the target effect. Many take McGrath’s proposal to entail the categorical claim that only abnormal absences are causes (e.g., Halpern and Hitchcock, 2015; Clarke, 2018), and this categorical claim finds support in recent experiments on ordinary causal judgments (e.g., Henne et al., 2017; Willemsen, 2018). I argue that so-called ‘double-prevention mechanisms’ provide counterexamples to both the normal proposal and the categorical claim.

In §2, I outline McGrath’s normal proposal and the categorical claim. In §3, I present a case of ‘single action’ double prevention and demonstrate how it provides a counterexample to the categorical claim. I also show that such cases are captured by McGrath’s proposal, indicating that her proposal does not entail the categorical claim. In §4, I argue that cases of ‘double action’ double prevention provide a counterexample to the normal proposal. I conclude that double prevention mechanisms pose a challenge for both abnormality approaches to absence causation.

2 The Abnormality Approaches

Theories of causation appear to allow for either too much or too little causation by absences.¹ The problem can be exemplified with pairs such as:

- (1) My not watering my plants caused them to wither.
- (2) Jeff Bezos not watering my plants caused them to wither.

¹I use the term ‘absences’ rather than ‘omissions’ as I take it to be a more general term. Note however, that the terms are often used interchangeably in the literature (e.g., Hitchcock, 2007). To keep matters brief, I set aside the further question what absences *are*. See Bernstein (2015) for a discussion of this issue.

If I neglected my plants and they subsequently withered, then (1) seems true, but (2) seems false. Most standard theories of causation fail to capture this difference. For example, according to counterfactual dependence views of causation, such as Lewis (2000), both are true: If either I or Jeff Bezos *had* watered my plants they would not have withered. According to process views, such as Dowe (2000), neither is true: neither absence transfers energy or a conserved quantity onto the withered plants. Both theories fail to capture the perceived difference between (1) and (2) (cf., Hall, 2004).

McGrath (2005) proposes to solve this problem by combining a standard counterfactual criterion for causation with a normality criterion. Abstracting away from some details that will not matter here, we can represent her proposal as follows (cf., McGrath, 2005, p. 142):

NORMAL PROPOSAL (NP) Absence *A* causes effect *E* iff (i) *A* and *E* meet the standard counterfactual dependence requirements *and* (ii) *A*'s corresponding presence is a *normal* preventer of *E*.

The corresponding presence to my not watering my plants, i.e. my watering my plants, is a normal preventer of my plants withering. The same does not hold for Bezos watering my plants: it would be markedly abnormal for *that* to be the event that prevents my plants from withering. In this case, what is normal is settled by a standard of care for one's property, and perhaps some standard about not interfering with the property of strangers. McGrath argues that we should be liberal about the kinds of standards that make for (ab)normality in the context of absence causation (2005, p. 138–141).² Absences can be statistically or prescriptively abnormal, when they diverge from statistical or prescriptive norms, but they can also be abnormal in virtue of violating norms of proper functioning or local customs. For example, my alarm clock not going off in time can cause me to be late for a meeting — alarm clocks ought to go off in time — and a man not wearing a yarmulka in a synagogue can cause shock.³

²See also Hitchcock and Knobe (2009, p. 597–598), Halpern and Hitchcock (2015, p. 429–430), and Henne et al. (2017, fn. 4).

³One could also classify customs and norms of proper functioning as prescriptive norms. The labeling

The interaction between norms and causation has received considerable attention since McGrath's **NP**. Experiments on ordinary causal judgments described in Hitchcock and Knobe (2009); Clarke et al. (2015); Samland and Waldmann (2016); Henne et al. (2017); Willemsen (2018); Willemsen and Kirfel (2019); Sytsma (2020), and Henne et al. (2021) all indicate that norms affect which events or absences we consider causes. Henne et al. (2017) argue that the results of such experiments provide robust evidence for a categorical claim about absence causation (p. 273):⁴

CATEGORICAL CLAIM (CC) Absences are causes only if they are abnormal.

Our own test case also aligns with **CC**. My not watering my plants is abnormal, whereas Jeff Bezos not watering my plants is patently normal

We now have two abnormality approaches to absence causation: **NP** and **CC**. Many authors take these to be closely related. For example, Henne et al. (2017, p. 273) treat **CC** as a direct consequence of **NP**, and Halpern and Hitchcock (2015, p. 437), Clarke (2018, p. 330), and Willemsen (2018, p. 1607) take formulations like **CC** to be an apt summary of **NP**. However, the two proposals are *prima facie* distinct: **NP** focuses on the (ab)normality of potential prevention relations, whereas **CC** focuses on the (ab)normality of absences. As will become clear, these two abnormality approaches also yield different predictions about the causal role of absences in one variety of so-called 'double prevention mechanisms'. What is more, neither proposal yields the right predictions about all varieties of such mechanisms.

is not important. The important point is that the abnormality approaches rely on a liberal conception of norms.

⁴Henne et al. recognize that skeptics of absence causation, such as Dowe (2000) and Beebe (2004), deny that ordinary causal judgments provide evidence for claims about causation, but argue that the burden of proof is on the skeptics (2017, p. 282). Our focus will not be on such criticism of abnormality approaches, so we will set the issue aside here.

3 Single Action Double Prevention

In double prevention mechanisms, one occurrence causes another by preventing one of its preventers from occurring. We will use revolver mechanisms as our leading example of such double prevention mechanisms.⁵ In so-called ‘single-action’ revolvers, one needs to manually cock the hammer and pull the trigger to fire the gun. To cock the hammer is to draw it back in a position where it is blocked by a ‘sear’ and pressured by a coiled spring (see Fig. 1). If not for the sear’s blocking the hammer, the spring

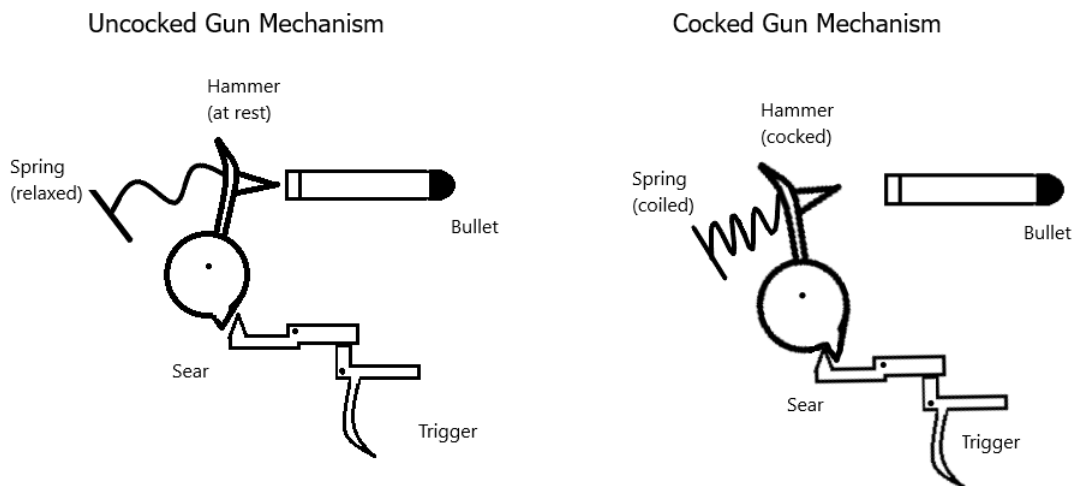


Figure 1: Single action mechanism

would uncoil and the hammer would strike the bullet, causing the gun to fire. Pulling the trigger in such revolvers performs the sole action of removing the sear (hence the name ‘single action’ revolver). In short, pulling the trigger causes the gun to fire by preventing the sear from preventing the gun from firing (See Fig. 2).⁶

Such mechanisms play a central role in the case for absence causation. After all, the trigger causes the gun to fire via an absence: the sear *not* blocking the hammer (cf.,

⁵As noted by a referee, these cases might not have all the features of the paradigmatic double prevention cases introduced by Hall (2004). For convenience, I take the label ‘double prevention mechanism’ to apply to any causal mechanism in which c causes e by preventing e from being prevented. Nothing of

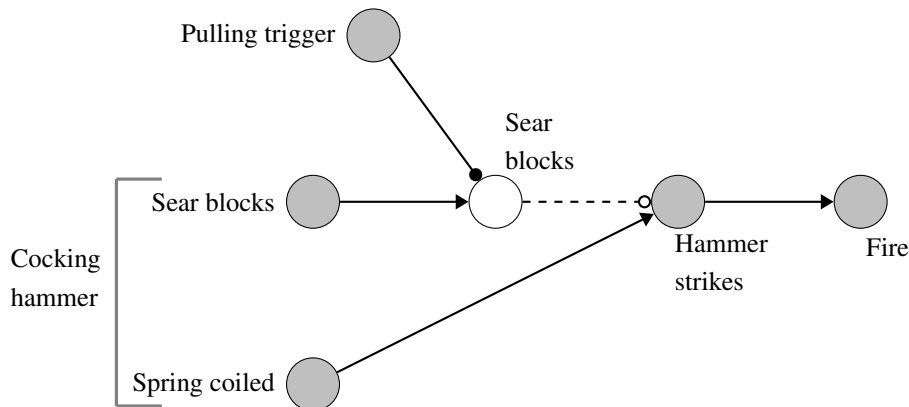


Figure 2: Cocking the hammer comprises both coiling the spring and making the sear block the hammer. Pulling the trigger unblocks the hammer, causing the gun to fire (cf., Schaffer, 2004, p. 200)

Schaffer, 2000, p. 287).⁷ Opponents of absence causation cannot allow this absence to be a cause, and they thus have a hard time explaining how pulling the trigger can cause the gun to fire. Schaffer (2000, 2004) has forcefully argued that similar mechanisms are prevalent and that this forces opponents of absence causation to deny a vast quantity of respectable causal claims.

Such mechanisms also suggest that **CC** is false. The sear releasing, i.e. not blocking, the hammer seems to cause the gun to fire. Moreover, it is an important causal step in the causal chain from the trigger being pulled to the gun firing. So aside from the sear not blocking the hammer intuitively being a cause of the gun firing, denying this absence causal status would also mean that we no longer have a full causal chain from

weight hangs on this terminological choice.

⁶Filled circles represent occurrent events. Empty circles represent events that fail to occur. Uninterrupted lines ending in a dot represent actual preventive causal relations. Uninterrupted lines ending in arrows represent actual non-preventive causal relations. Dotted lines represent non-actualized relations. The grey bracket represents that cocking the hammer comprises two separate events.

⁷As pointed out by a referee, Schaffer does not use the term ‘double preventer’ to describe gun mechanisms. However, he says that “trigger pullings only cause bullet firings by disconnection” Schaffer (2000, p. 287), and announces earlier that “disconnections may also be called (following Ned Hall) ‘double preventions.’” (*ibid.* p. 286, fn. 2). Schaffer (personal communication) confirms that he intended the gun mechanisms to count as double preventions.

the trigger being pulled to the gun being fired.⁸ According to **CC**, the sear not stopping the hammer can only fulfill this causal role if it is abnormal. But the sear not stopping the gun is patently normal according to the relevant norms.

First, it is descriptively, i.e., statistically, normal for the sear not to block the hammer. Guns are typically uncocked, and in uncocked guns, the sear does not block the hammer. Even if the assumption about guns being typically uncocked fails, we would not want to claim that the absence would not cause the gun to fire in worlds where guns are typically uncocked

Second, the absence is normal from a proper functioning perspective as well. When the trigger is pulled, the sear is *supposed* to release the hammer, and its blocking the hammer after the trigger is pulled would mean that the gun *malfunctions*. One might object that it is illegitimate to include the cause of the absence, i.e., the trigger being pulled, when assessing its normality. Causes will often make their effects statistically likely, which makes it problematic to include causes when assessing the descriptive, statistical normality of an event or absence. However, when assessing the proper functioning of a mechanism, proximate causes must sometimes be included. For example, when assessing whether a high barometer reading is an instance of proper functioning, we should include information about what caused the reading. If the reading is caused by high atmospheric pressure the answer is ‘yes’. If the reading was caused by the needle being stuck, the answer is ‘no’ (cf., Rubner, forthcoming, p. 6). Similarly for the gun mechanism: to assess whether the sear not blocking the hammer is an instance of proper functioning, we should include the information that the trigger was pulled. In such situations it is functionally normal for the sear to not block the hammer.⁹

⁸Livengood and Sytsma (2020) argue that the assumption that all causal mediators are causes is both intuitively compelling and supported by several theories of causation. They also present some evidence against this assumption, but leave it open whether the assumption might be worth holding onto despite this evidence (2020, Section 5). Moreover, the reported judgments on purely mechanical cases where the mediator fulfills its function, as is the case for the hammer release in gun mechanisms, were significantly more in favour of conferring causal status on the mediator than in other test cases (Livengood and Sytsma, 2020, Section 4.3). I leave an in-depth discussion of their results for another occasion. The causal mediator assumption is respectable enough that it would be a significant outcome if abnormality approaches were committed to its denial (cf., §5).

⁹I am grateful to an anonymous referee for raising this issue.

Finally, as the example concerns an inanimate mechanism, moral norms and social customs do not come into play. Overall, I see no independently motivated reason for treating the sear not blocking the hammer as abnormal.¹⁰ In single action revolvers, normal absences cause the gun to fire when the trigger is pulled. As **CC** requires that all causal absences are abnormal, the working of such revolvers suggests that **CC** is false.

By contrast, **NP** seems to get the single action revolver case just right. According to **NP**, the sear blocking the hammer needs to be a normal *preventer* of the gun firing in order for the absence of the sear to count as a cause of it firing. McGrath proposes to evaluate presence C_o being a normal preventer of an effect e as follows (2005, p. 141, my emphasis):

[...] had e been prevented, it would have been normal for an event of type C_o to have prevented e . That is, in the closest worlds in which e is prevented, it is *normal* that it is prevented by an event of type C_o , relative to some actual standard S .

To see whether the sear blocking the hammer counts as a normal preventer of the gun firing, we should look at the closest worlds in which the gun did not fire. But not just any of these worlds will do, as the normality constraint forces us to only consider those closest worlds where the firing is prevented *in a normal way*.¹¹ In those worlds where the gun is prevented from firing in a normal way, it is likely that the trigger was not pulled. After all, once the trigger is pulled, the revolver can only be prevented from firing by a *malfunction*.¹² The closest normal world where the gun was prevented from firing would thus be one where the shooter cocked the gun, but did not pull the trigger.

¹⁰Hitchcock's (2007, pp. 506-7) proposal to treat departures from stationary states as 'deviant' might deliver the right result here, as the sear is in such a stationary state when the trigger is pulled. See also Halpern and Hitchcock (2015, p. 433). However, this proposal is not intended to eliminate certain absences from being causes and, as there is no clear descriptive or prescriptive norm for being stationary, it is unclear how it fits the normal-abnormal distinction favoured by McGrath and others. If one were to combine **CC** with Hitchcock's proposal, the double action revolver discussed in §4 would still provide a counterexample.

¹¹See also McGrath (2005, p. 135–136).

¹²Or by some external abnormality, such as a meteor destroying earth.

In such worlds, the gun is prevented from firing by the sear blocking the hammer. Thus, the sear blocking the hammer is a normal preventer of the gun firing, and, according to McGrath's **NP**, the sear *not* blocking the hammer qualifies as a cause of the gun firing

The defender of **NP** can thus rely on the subtle distinction between an occurrence being *normal* and an occurrence being *a normal preventer* of a certain effect. Being a normal preventer of *e* does not require being normal across all the worlds that are typically included; it just requires being normal in those nearby worlds where *e* happens to be prevented. And C_0 might well be normal in *those* worlds without being normal across a wider variety of worlds. The sear blocking the hammer is a case in point: it is abnormal for the sear to block the hammer, but if we are to restrict ourselves to nearby worlds where a gun that actually fired is prevented from firing, the sear blocking the hammer is a normal way for that firing to have been prevented. Or so the defender of **NP** could argue.

In §2, we mentioned that **CC** is often treated as both a direct consequence and an apt summary of **NP**. Single action double prevention mechanisms show that they in fact make different predictions, and that **NP** does not entail **CC**. A normal absence, such as the sear not blocking the hammer, can still have a corresponding presence that is a normal preventer of the target effect. Such a normal absence counts as a cause according to **NP**, but not according to **CC**.¹³

Based on these findings, one might decide to resort to **NP**, and let go of **CC**. However, a slight variation on the single action revolver spells trouble for **NP** as well.

4 Double Action Double Prevention

Some revolvers aren't cocked manually. Instead, pulling the trigger activates both the cocking of the hammer and its subsequent release. Figure 3 represents the working of such 'double action' revolvers. As in a single action revolver, the firing mechanism

¹³The vignettes in experiments thought to corroborate **NP** also typically focus on the abnormality of the absence (e.g., Henne et al., 2017; Willemsen, 2018). However, as the reader can verify, these vignettes typically concern cases such as our (1) and (2), where **CC** and **NP** do make the same predictions.

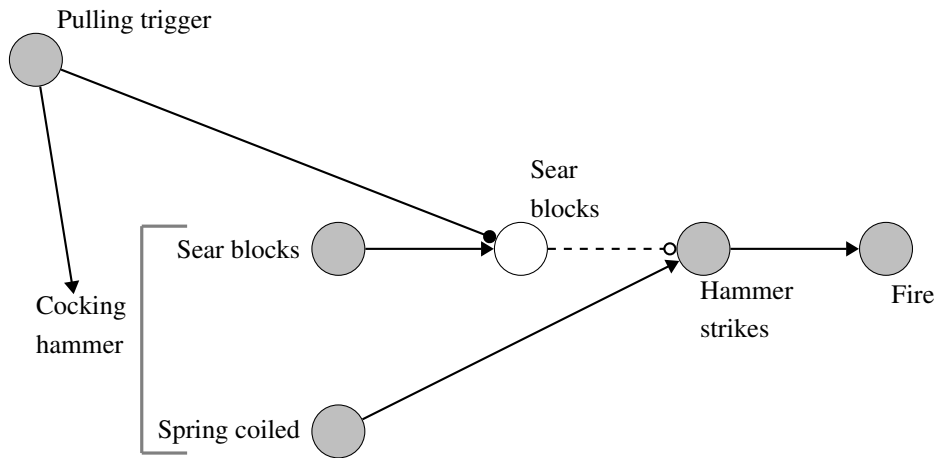


Figure 3: Pulling the trigger causes both the hammer’s cocking and its release.

works via an absence: the sear *not* blocking the hammer causes the hammer to strike the bullet. Double action revolvers differ from single action models in that one cannot *just* cock the hammer without immediately causing the sear to release it, as pulling the trigger activates *both* the cocking and the releasing. Consequently, the sear can only prevent the gun from firing when the mechanism *malfunctions* and pulling the trigger activates the cocking of the hammer but fails to activate its release. Such malfunctions are abnormal, such that, if we consider a double action revolver firing, it would *not* be normal for the sear to have prevented it from firing.

We now have a counterexample to **NP**: there is an absence (the sear not blocking the hammer) that causes a target effect (the gun firing), even though the corresponding presence (the sear blocking the hammer) is *not* a normal preventer of that target effect. Defenders of **NP** might insist that the relevant prevention relation is still normal in the required sense. However, it is again hard to see what would be the independent motivation for such an insistence. One proposal is to maintain that the sear is still the most normal preventer available for the gun firing. But why should it be more normal for the sear to malfunction than the trigger, or any other part of the mechanism? Stipulating that the sear is the most reliable part of the gun mechanism, with other parts having a

fifty percent chance of malfunctioning, does not appear to affect our judgment that the sear releasing the hammer caused the gun to fire. This indicates that the normality of the prevention relation is not what makes the absence a cause of the gun firing.

5 Conclusion

I raised a challenge for two abnormality approaches to absence causation. These approaches effectively reduce the objectionable amount of absence causation allowed by dependence theories, but they fail to capture the causal role of absences in the double prevention mechanisms that helped motivate the case for absence causation in the first place. Denying the causal role of those absences seems counterintuitive and leaves the working of double prevention mechanisms needlessly gappy.

Perhaps this challenge can be addressed within an abnormality approach. Given their past successes, we might hold out hope that the counterexamples can be captured by polishing the approaches further. Alternatively, further systematic surveying of causal judgements might indicate that we typically do not judge the absences in double prevention mechanisms causes, leaving us with only the worry that some causal chains are too ‘gappy’. Perhaps the benefits of the current implementations outweigh that cost.¹⁴ Spoils to the victor! Even so, it would remain a cost to be factored in when assessing the viability of abnormality approaches and weighing them against the alternatives. Either way, further research on these issues is required before we can conclude that abnormality approaches to absence causation are successful.¹⁵

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¹⁴See also fn. 8.

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