

ABSENCES AS CAUSES:
A DEFENSE
OF
NEGATIVE CAUSATION

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of Doctor of Philosophy

by

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The undersigned, appointed by the Dean of the Graduate School, have examined the dissertation entitled

**ABSENCES AS CAUSES:
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OF
NEGATIVE CAUSATION**

Presented by Michael Hartsock

a candidate for the degree of Doctor of Philosophy

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For Renea, Lillian, and Norah.

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Chapter 1

The Problem of Negative Causation

1.1 Introduction

Causal claims permeate our discourse. We think that causation underlies all change, and we make causal claims about changes we merely observe and changes we initiate. In a game of billiards, when the cue ball strikes an object ball and the object ball moves, we claim that the cue ball caused the object ball to move. Minimally, for any causal claim — whether the claim is about billiard balls or innumerable other things — we must specify a *cause* and an *effect*. No matter what else we might build in to the formula for causal claims, these components are required: the thing that causes and the thing that is caused. Without both elements, the causal claim is incomplete.

This very general characterization of causal claims doesn't tell us much about the nature of causation, but it does tell us something. Though we often speak of *objects*, like billiard balls, causing and being caused by other objects, we can, as most philosophers are inclined to do, speak of events. For our earlier example, we might specify that the event of the cue ball colliding with the object ball caused the event of the object ball moving. But as for our general formula, it doesn't matter what kind of things are causes and effects. What matters is that they are *things*. Our basic formula requires that we state which things cause what things.

The requirements of our basic formula seem too obvious to warrant mentioning, but there is trouble brewing, even at this most basic level. There are cases of causation where one or more of the elements of our formula seem to go missing. It is common to talk about what doesn't happen causing that which does and to talk about what does happen causing that which doesn't. Examples abound. A lack of rain causes forest fires and poor harvests. Pushing the emergency stop on an industrial machine can prevent accidents. Brushing with a fluoride toothpaste can prevent cavities. Each of these cases describes a scenario where we are inclined to judge that an absence either causes or is caused. These are paradigm cases of a seemingly ubiquitous phenomenon — *negative causation*. Negative causation is either by prevention — causation of an absence — or omission — causation by an absence. We can also have prevention by omission. In short, negative causation occurs any time we have an absence as a cause, effect, or both.

Our grammar hides the trouble with negative causation; we say that 'an absence of rain' caused the forest fire. We use articles, definite and indefinite, to indicate absences — but what is being indicated? On the face of it, it seems that an 'absence of rain' is not a metaphysically respectable thing at all. An absence is not *a* 'nothing.' It isn't even an *it*, or so the opponents of negative causation would argue. If the opposition is correct, then negative causal claims are not causal claims, not complete ones anyway. One or more of the essential components of our basic causal formal are apparently missing.

Perhaps, as some have argued, we should abandon the possibility of negative causation. Thus, a great many of our intuitive causal judgments are incorrect. However, common sense strongly suggests that many of the changes we observe and initiate are either the result of or result in absences. *And change is what causation is all about.* I contend that common

sense should not be abandoned. In this dissertation, I argue that negative causal claims can be complete and true causal claims. That is, negative causation is genuine causation.

I argue that the barrier to accounting negative causation as *real* causation issues from a misunderstanding of absences. I agree with our basic formula: Causal claims require things for both cause and effect. I disagree with the assertion that such things cannot be supplied by negative causal claims. Thus, much of the work of this dissertation is clarifying and defending what I take to be the proper understanding of ‘absences.’ Roughly and to be clarified in later chapters, I argue that absences — those that are intuitively taken to be causes or effects — are not metaphysical absences. Rather, such ‘absences’ feature in negative descriptions of ordinary positive causes. The core of my view is that negative causal statements can be true and express genuine causal relations in virtue of having positive entities as the truthmakers. The *negative* of negative causation is merely apparent. Negative causal statements can be grounded in an ontology that consists of only positive entities.

In this dissertation, I do not attempt a general analysis of causation, nor do I aim to provide a general theory of causation. Rather, my analysis is offered to clarify both what absences are (or are not) and what causal role absences can play. Since I do not offer a proprietary theory of causation, I nest this analysis within extant accounts of causation. I demonstrate that absences can be consistently accounted as causes and effects across a variety of theories of causation. The crucial insight is that negative causation does not require any special treatment; there is no ‘special problem’ of negative causation. Negative causal claims specify causes or effects with negative descriptions, positive causal claims do so with positive descriptions.

1.2 The problem with negative causation

Following convention, I label the view that negative causation is genuine causation, *genuinism*. Given the cases mentioned above and the countless others that could be added to the list, it seems that genuinism needs little defense. However, genuinism has met with much philosophical scorn. Unfortunately for our ubiquitous phenomenon, many philosophers — if not most who write on the subject — reject the idea that ‘negative causation’ is real causation. After all, the adage *ex nihilo nihil fit* is well-entrenched in both philosophy and common sense. Presumably, absences are just *nothing*, and nothings cannot be causally productive (neither does it seem that a nothing could be produced). Simply attempting to talk about ‘nothings’ as capable of being produced or being productive is to speak nonsense. To produce nothing is simply not to produce and to be produced by nothing is to not be produced. Clearly, if we understand absences as ‘nothings,’ a defense of genuinism is a losing battle.

By way of a preview, this is precisely understanding of absences that I plan to challenge. I think that absences, at least those ubiquitous and intuitively causal ones, aren’t ‘nothings’ — not metaphysically anyway. But more on that later. First and foremost, this dissertation is a defense of the commonsense view that negative causal statements can be true *and express genuine causal relations*. I offer an analysis of negative causation that gives the best account of negative causation that is both intuitively and theoretically tenable.

This defense is essential as philosophical scrutiny of negative causation issues a number of deep problems. As I suggested earlier, genuinism runs afoul of well-established philosophical principles. Together, these principles are the foundation of the relationalist view of causation. The most central principle is, quite simply, that causation is a relation.

Two corollary principles clarify the view: (a) Relations require entities for *relata*; and, (b) There are no negative entities. Relationalism admits of a great variety of disparate theories of causation, including everything from most counterfactual theories to persistence theories of causation. Indeed, the commitment to relationalism, even if only implicitly, is so widespread that relationalism is the closest thing to philosophical orthodoxy we have in contemporary philosophy of causation.¹

On the face of it, relationalism entails that omission and prevention cases are not cases of genuine causation. Absences can be neither causes nor effects simply because they aren't *things*, and causation — a relation — needs things for *relata*. And it doesn't matter what you take those *relata* to be — facts, events, objects, states of affairs, or whatever; an absence is, presumably, the non-existence of a *whatever*. Thus, our theoretical commitments are inconsistent with our intuitive judgments about omissions and preventions.

To resolve the inconsistency, we have a few options.

1. Relationalism is false and genuinism is true.
2. Relationalism is true and genuinism is false.
3. Relationalism and genuinism are consistent (and true).

1. For a sample of adherents to relationalism see: D. M. Armstrong, *A World of States of Affairs* (New York: Cambridge University Press, 1997); Helen Beebe, "Causing and Nothingness," in *Causation and Counterfactuals*, ed. Ned Hall John Collins and L. A. Paul (Cambridge: MIT Press, 2004); Donald Davidson, "Causal Relations," *The Journal of Philosophy* 64, no. 21 (1967): 691–703; Phil Dowe, "A Counterfactual Theory of Prevention and 'Causation' by Omission," *Australasian Journal of Philosophy* 79, no. 2 (2001): 216–226; David Lewis, "Causation," *The Journal of Philosophy* 70, no. 17 (1973): 556–567; Dissenters most notably include: David Lewis, "Causation as Influence," *Journal of Philosophy* 97 (2000): 182–197; D. H. Mellor, "For Facts as Cause and Effects," in *Causation and Counterfactuals*, ed. Ned Hall John Collins and L. A. Paul (Cambridge: MIT Press, 2004).

Relationalism is false and genuinism is true.

If we take this option, then we reject the first principle. If causation is not a relation, then we need not seek *relata*. If we take this approach, aptly named non-relationalism, then it doesn't matter that absences are not entities. If causation is not a relation, then we do not need entities as *relata* for any particular case of causation. This approach has prominent advocates, including D.H. Mellor and David Lewis.² This approach requires a significant revision of our understanding of causation, a revision that should not be undertaken lightly.

Generally, I assume relationalism is true, and my primary goal is to demonstrate that relationalism and genuinism, properly understood, are consistent. However, I take care to justify this assumption to highlight the need to reconcile relationalism and genuinism. In chapter two, I argue that the primary motivation for non-relationalism is the preservation of our genuinist intuitions. Thus, if we can preserve genuinism from within the relationalist framework, then the motivation for non-relationalism is severely undermined. Furthermore, non-relationalism has a difficult theoretical row to hoe. For one, we ordinarily speak of causation as we do any other relation. The grammar and usage of causal claims is consistent with the grammar and usage of any other relational claim. Thus, there is a strong intuition that causation is a relation. Furthermore, if we reject the relational nature of causation, it is quite difficult to say how cause and effect are connected if they are not *related*. That is, once we deny that causation is a relation, it is quite difficult to say what causation is. The various non-relationalist accounts have little to add here, other than to insist that whatever causation is, it isn't essentially relational.

2. Mellor, see n. 1; Lewis, "Causation as Influence," see n. 1; David Lewis, "Void and Object," in *Causation and Counterfactuals*, ed. Ned Hall John Collins and L. A. Paul (Cambridge: MIT Press, 2004).

In chapter two, I develop these two concerns to establish the *prima facie* case for relationalism. However, I do not attempt to mount a full refutation of non-relationalism, as this would take me too far afield of the issue of negative causation. Rather, I am content to provide the *prima facie* reasons to accept relationalism and undermine the primary motivation for rejecting it.

Relationalism is true and genuinism is false.

This is the most common response to the putative inconsistency between relationalism and genuinism. On this approach, we must hold that our intuitive judgments about negative causation are false. Despite appearances, absences are neither causes nor effects. There is no negative causation, and common sense is mistaken. This approach is favored by most critics of genuinism, most notably and recently, Helen Beebe and Phil Dowe.³ If absences are causes, proponents of this option argue, then there must be negative entities. At best, this is metaphysically perverse; at worst, it is incoherent. Just think: Absences, things that don't exist, exist. Thus, if absences are non-entities, then there is no negative causation.

Denying genuinism has its costs. Commonsense is quite ready to judge that absences are causes. Even if claiming that 'an absence of rain caused the forest fire' sounds odd, we would not hesitate to claim that 'the drought caused the forest fire.' Unfortunately, 'drought' is simply a word to describe a prolonged absence of rain. Such rampant error deserves explanation. Helen Beebe and Achille Varzi claim that we confuse causation with

3. Beebe, see n. 1; Dowe, "A Counterfactual Theory of Prevention and 'Causation' by Omission," see n. 1; Phil Dowe, "Causation and Misconnections," *Philosophy of Science* 71, no. 5 (2004): 926–931.

causal explanation.⁴ Thus, absences can figure into causal explanations of events, but not in virtue of being causes or effects. Rather, claims about absences provide causal information. Phil Dowe offers an alternate explanation, and claims that we confuse causation with *quasi-causation*, a closely related but decidedly non-causal concept.⁵ Quasi-causation, according to Dowe, is possible but not actual causation. Absences quasi-cause and are quasi-caused, but they do not cause and are not caused.

If either Beebee or Dowe are correct, then we have a nice starting point for relationalism. Only entities can be causes or effects, and when we mistakenly judge a non-entity to be such, we have an explanation for our mistake. However, I argue that both explanations fail. In chapter three, I argue that Beebee's explanation that absences cannot figure into causal explanations unless a cause is specified. This leaves two options: Either absences cannot figure into causal explanations, or we can specify causes and effects by speaking of absences. The former is surely false, and the latter entails my thesis. If a cause is specified by an absence in a negative causal claim, then that negative causal claim is true and expresses a causal relation. Furthermore, Beebee's approach only handles cases where we judge that an absence is a cause, not those where we judge that an absence is an effect. An attempt by Achille Varzi to extend Beebee's account to handle preventions cases, where an absence is judged to be the effect, fails. Fortunately for my account, it fails in instructive ways. Varzi's attempt helps to demonstrate how an absence specifies a positive entity.

4. Beebee, see n. 1; Achille Varzi, "Omissions and Causal Explanations," in *Agency and Causation in the Human Sciences*, ed. Francesca Castellani and Joseph QUITTERER (Paderborn: Mentis Verlag, 2007).

5. Dowe, "A Counterfactual Theory of Prevention and 'Causation' by Omission," see n. 1.

In chapter four, I argue that Dowe offers a solution in need of a problem. He formulates two general arguments against genuinism and offers his theory of quasi-causation as an alternative. However, I argue that even if these arguments succeed, quasi-causation doesn't *solve* any problems, it merely moves them. Quasi-causation inherits many of the difficulties that Dowe credits to genuinism, and quasi-causation becomes a placeholder for those cases which don't fit neatly into his relationalist account of causation. Fortunately, I argue that when 'absences' are properly understood, not as non-entities, but as negative descriptions of entities, then there is no need to introduce quasi-causation.

The moral of chapters three and four is that if relationalism straightforwardly precludes negative causation, then commonsense is very often in error and we have little to say about why such errors are so commonplace. But if causation is a relation, and relations require entities, then what option do we have to vindicate commonsense?

Relationalism and genuinism are consistent (and true).

I have already suggested and rejected one way to render relationalism and genuinism consistent: we could postulate negative entities. That is, we could maintain that absences are either events, objects, or states of affairs, capable of serving as *relata*. I argue throughout that this option is unnecessary and philosophically unpalatable.⁶

The option I favor challenges the inconsistency of genuinism and relationalism head on. I think that the critics and proponents of negative causation alike have mistakenly assumed that the 'negative' in negative causation is well-understood. More specifically, I do not suppose that the intuitive case for negative causation suggests much at all about the nature

6. Alternately, we could deny that relations require *relata*, however, the principle that relations require *relata* seems analytically true if any is. I don't consider the possibility seriously.

of absences. Rather, the intuitive case suggests that certain objects, events, or whatever which we commonly call absences, can either cause or be caused. I take this as my starting point. Though philosophers on the subject of causation generally assume that there is a distinction between negative and positive causation, a survey of the literature provides little guidance for determining whether some putative absence is a genuine metaphysical absence. Since analyses of causation typically begin with an assessment of intuitive cases, we need to be able to determine whether a particular case is really an instance of negative causation before much progress can be made on the general issue.

In chapters three and four, as I assess and respond to alternatives to genuinism, I sketch the outline of my proposal. I argue that the putative inconsistency between genuinism and relationalism is merely apparent. We can preserve our theoretical, relationalist commitments and vindicate our intuitive judgments that absences cause and are caused.

In chapter five, I carefully lay out the requirements for an account of genuinism *sans* negative entities that is consistent with relationalism. In order to lay out these requirements, I nest the development of my proposal from within the framework of David Armstrong's theory of singular causation. The reasons for this are two fold: One, his account pays close attention to the ontological commitments of a causal claim. This enables me to spell out my account of genuinism in a way that clearly demonstrates that negative causal claims can specify ordinary positive entities. Two, his account is among the most restrictive and least amenable to genuinism. His ontological requirements are quite strict. If I can show that genuinism can meet these strict requirements, the application of my account to other, less restrictive accounts should be quite apparent.

I close chapter five with a careful characterization of my account of genuinism, given the demands of Armstrong's account. I suggest how my account might work given other

accounts of causation both in chapter five and throughout the dissertation. For example, in chapter four, I suggest how my account applies to a process or persistence theory of causation. However, the full development of my account waits until chapter five. The rough idea is that negative causal statements — those that assert causation by either omission or prevention — can be true in virtue of specifying the actual causal *relata* by some negative description. Thus, we can maintain our principles without claiming that our intuitive judgments about omissions and preventions are false. We preserve the truth of our intuitive judgments about negative causation without violating the core propositions of relationalism.

Also in chapter 5, I argue that this can be done with ontological seriousness. One of the central objections to genuinism is that it results in an untenable ontological explosion. Consider a paradigm example negative causation that I frequently employ in this dissertation: My failure to water my houseplant caused the plant to wilt. The problem is that if it is true that my failure to water the plant is a cause of the plant's death, then so too for *everyone else's failure to water the plant*. It seems that if we accept my failure as a cause, then we multiply the causes of the plant's death many times over, if not infinitely. I show that this problem is illusory if we accept my analysis of negative causation.

The crucial insight of this dissertation is that negative causation requires no special treatment. We can account for it as we ordinarily account for uncontroversial cases of positive causation. No doubt, it is unclear how we should account for positive causation. The moral is that accounting negative causation as genuine causation creates no additional problems. The two most significant challenges I face are these: I must be able to show that negative causation is consistent with relationalism without postulating negative entities, and I must be able to show this without triggering an ontological explosion of causes. I

focus on meeting these challenges throughout the dissertation: Negative causal statements can be true and express genuine causal relations by specifying entities as causes or effects via a negative description. Any explosion of causes is merely apparent. At worst, we suffer an explosion of causal descriptions, but our causal ontology remains properly constrained.

1.3 Motivations for genuinism

In the previous section, I sketched the challenges that face genuinism and how I will meet those challenges. In this section I expand on the motivation for meeting those challenges. Vindicating commonsense is admirable, but I do not think that it is reason enough. More importantly, causal judgment and reasoning plays a central role in many domains of inquiry. Various theories of ethics, epistemology, and perception, to name a few, maintain causal conditions as a vital component. For example, a causal condition for perception is well-accepted and, though there is less agreement, a causal condition for moral responsibility is commonplace in the literature and intuitively well-motivated. And in each of these domains — and perhaps many others — rejecting the possibility of negative causation is a severe theoretical handicap. In this section, I will give an overview of the commitment to the causal condition in both perception and moral responsibility. I go on to highlight the implications of rejecting negative causation for each.

1.3.1 Causation and Perception

Following Grice (1961), the vast majority of theorists maintain a causal requirement for perception. Grice argues that there must be a causal connection between the perception that x is F and x 's being F . Grice writes,

[F]or an object to be perceived by X , it is sufficient that it should be causally involved in the generation of some sense-impression by X in the kind of way in

which, for example, when I look at my hand in good light, my hand is causally responsible for its looking to me as if there were a hand before me.⁷

The Gricean idea is straight-forward. For it to be true that I see my hand before me, then my hand must be causally responsible in whatever way required by the relevant sense modality for its looking to me as if my hand is before me. In a similar spirit, P.F. Strawson (1974) offers a more specific formulation of the causal condition:

It is a necessary condition of an M-experience being the M-perception it seems to be that the experience should be causally dependent on appropriate M-facts.⁸

In the spirit of the Gricean condition, it is a necessary condition of a hand-experience being the hand-experience it seems to be that the experience should be causally dependent on the appropriate hand-facts. The two passages presented here are canonical statements of the causal condition of perception, a condition that enjoys a rare philosophical consensus.

This is trouble for the critics of negative causation. It is obvious that I can see that the room is dark and I can see that there is a pothole in the road. But darkness and holes aren't things; they are absences of things, light and pieces of the road, respectively. Return to Strawson's formulation of the causal condition as applied to perception of the dark room: It is a necessary condition of a dark-room-experience being the dark-room-experience it seems to be that the experience is causally dependent on the appropriate dark-room-facts. But 'dark-room-facts' are not facts at all, since talk about darkness is talk about light-room-facts that do not obtain. The upshot is that if the causal condition for perception is correct and absences aren't causes, then we can't see what we surely do, dark rooms and potholes.

7. H. P. Grice, "The Causal Theory of Perception," *Aristotelian Society: Supplementary Volume* Suppl 35 (1961): 142–143.

8. P.F. Strawson, *Freedom and Resentment and Other Essays* (London: Methuen, 1974): 71.

1.3.2 Causation and Moral Responsibility

Intuitively, we can only be held morally responsible for some consequence if we — at least partly — brought it about. As Carolina Sartorio notes in a recent essay, “The thesis that [Moral] responsibility for outcomes requires causation is widespread among philosophers.”⁹ Imagine being held responsible for some outcome *O* when nothing you did or failed to do brought *O* about! The idea is just that we can only be held responsible for something if we are connected to it in the right way, and the natural candidate for that way is a causal connection.

To highlight our commitment to the causal condition for moral responsibility, consider the following case, cited by Judith Jarvis Thomson in her (1984).

Summers-v-Tice: Plaintiff Summers had gone hunting with the defendants Tice and Simonson. A bird was flushed and both Tice and Simonson fired negligently in the direction of Summers. As a result, a single bit of shot became lodged in one of Summers’s eyes. Forensic evidence was unable to determine from whose gun the shot originated. Both defendants were equidistant from Summers, and it was equally likely that the shot originated from Tice as Simonson. The courts found both defendants “jointly and severally liable.”¹⁰

The upshot of this case is that someone is being held liable for a harm he didn’t cause, yet we are not inclined to regard the court’s judgment as a great injustice. After all, both Tice and Simonson acted negligently, and either one could have caused the harm. Off hand, it seems that this case suggests that we should give up on the causal condition. But, I maintain, as does Thomson, that our judgment about this case turns on mere epistemic concerns.

9. Carolina Sartorio, “How To Be Responsible For Something Without Causing It,” *Philosophical Perspectives* 18, no. 1 (2004): 316.

10. Judith Jarvis Thomson, “Remarks on Causation and Liability,” *Philosophy and Public Affairs* 13, no. 2 (1984): 102–104.

Thomson goes on to consider a hypothetical version of the Summers case where our intuitions depart from the verdict. Imagine a qualitatively identical case, except that, suddenly, during the trial new evidence is discovered which determines that the shot came from Tice's gun. Our intuitions shift. Now we are disinclined to hold Simonson "jointly and severally liable." Sure, we would hold Simonson morally responsible for something, his negligent shooting, but not the consequence in question, the injury to Summers's eye. The difference is a difference of causality. If there is no causal condition for morality, then we can't explain why our judgment shifts once we know whose gunshot caused the harm. But if we endorse the causal condition and deny the possibility of negative causation, then we are unable to explain why we are so often morally responsible for consequences that result from what we do not do. If I fail to water my plant, I am morally responsible for its death. This is even clearer in more tragic cases, like those of parental neglect.

1.3.3 So What?

I do not intend to try to defend the causal conditions for either perception or moral responsibility, and any attempt to do so is beyond the scope of this dissertation. However, what this discussion should galvanize is the need to take seriously our intuitive negative causal judgments. The implications of denying genuineness involve more than merely shrugging off our commonsense negative causal judgments. Causation matters, and denying negative causation will significantly affect the implications of any theory which makes essential use of causation. The goal of the previous section was merely to ward off any notion that the issue of negative causation has only narrow metaphysical interest. Negative causation matters.

Chapter 2

Causation: Relationalism v. Non-Relationalism

The central concern of this dissertation is what I will call the problem of the missing *relata*. This, I take it, is the fundamental difficulty facing genuinism. As I suggested in the previous chapter, the relation *causation* needs *relata*. Thus, the overarching goal of this dissertation is to *find* those *relata* in a manner that does not postulate negative entities or trigger an ontological explosion of causes. That is, the goal is to find metaphysically respectable *relata*. In the face of a daunting search, we should always ask whether it is worth undertaking. Do we need to solve the problem of the missing *relata*, or can we just take an end run around it? To deny relationalism is to take such a run.

No doubt, it is most natural to regard causation as a relation. We certainly *speak* as if it is. The way we use ‘causation’ mirrors our usage of any other relational term. Uncontroversially, we say that “Sam is the father of Sue” and this statement expresses the dyadic relation ‘*x* is the father of *y*’ as being predicated by the ordered pair (Sam, Sue). Causal statements bear an analogous structure. When we say that “The barking dog caused the cat to flee” we appear to express the causal relation as being predicated by the relevant ordered pair. We can, at this point, leave the nature of the ordered pair ambiguous. They could be objects, events, or whatever. No matter their nature, the *relata* must exist if the causal relation does.

Throughout the dissertation, I generally assume that causation is a relation. In this chapter, I justify this assumption. In section one, I lay out the *prima facie* case for relationalism. Following Jerrold Aronson, I demonstrate that causation, following its ordinary usage, is a “dimension-word.”¹ It is a general term encompassing a variety of more specific words, like make, push, pull, etc. The claim is that causation is the general category of relations, which we broadly employ when we wish to express the fact that one thing (e.g., an event) *makes* another thing. I highlight that we also use such terms when the thing is made by an *absence*. I further show that this usage also encompasses our usage of *prevents* — when the thing made is an absence.

While language might guide our metaphysical theorizing, it won’t settle anything. In section two, I review the primary motivation for non-relationalism. Central to the case for non-relationalism is the need to account for cases of negative causation. Thus, if we have to pick between relationalism and negative causation, the non-relationalists take negative causation. However, in doing so, they are forced to recognize far more negative causation than commonsense suggests. In saving some of our intuitions regarding negative causation, they are forced to violate many more. For example, to save the intuition that my failure to water my houseplant caused it to die, the non-relationalist must reject the intuition that President Obama’s failure to my houseplant *didn’t* cause it to die.

The account of negative causation that I offer preserves our basic usage of causation as a relation, and consistently includes negative causation. The key is that it does so without the unpalatable conclusion that Obama’s failure to water my houseplant caused it die. This chapter does not provide a full refutation of non-relationalism, but defends relationalism

1. Jerrold Aronson, “On the Grammar of ‘Cause’,” *Synthese* 22 (1971): 414–430.

by constructing a prima facie case for it and undermining the crucial motivation for non-relationalism.

2.1 The Prima Facie Case for Relationalism: The Grammar of ‘Cause’

Though an understanding of causation is evasive, we nevertheless manage to communicate using causal language. Aronson claims that ‘cause’ is a dimension-word. Borrowing from Austin (1962), a dimension-word is one that “serves as ‘the most general and comprehensive term in a whole group of terms of the same kind, terms that fulfill the same function.’” The class covered by ‘cause’ is a set of transitive verbs, like, push, pull, drop, makes, etc. The rule is that a transitive verb is a member of this class if it can be replaced with ‘cause’ when accompanied by certain other modifications. For example, ‘I dropped the ball on the ground’ can be transformed into ‘John caused the ball to be on the ground.’

Aronson specifies the general formulas for the transformation.² Sentences with the following syntax:

Noun Phrase + Transitive Verb + Direct Object + Objective Complement

can be replaced by:

Noun Phrase + caused + Direct Object + Copula + Objective Complement

The presence of the objective complement is what matters. The objective complement tells us what the direct object has become or what has become of the direct object.³

2. Aronson, see n. 1: 417.

3. Aronson notes an exception to this rule, but it is a minor one. “Transitive verbs such as ‘know’, ‘found’, ‘call’, etc. take objective complements, but they can not be replaced by ‘cause’. For example, ‘he *found* my remarks intelligible’ is not transformationally related to ‘He *caused* my remarks to be intelligible’. However, transitive verbs such as these can be rephrased in such a way as to eliminate the objective complement in favor of an appositive clause. Thus, ‘We thought his remarks unkind’ can be changed to ‘We thought *that* his remarks were unkind’, whereas ‘John knocked the book on the floor’ can not under go

This comports with the view that causation is about change. Causal claims involve something — specified by a noun phrase — changing another thing — specified by the direct object. The objective complement gives us information about the change that has taken place. Aronson’s point is straightforward — transitive verbs which take an objective complement are causal verbs.

Aronson takes care to elucidate the grammar of ‘cause’ for very specific purposes. He argues that a manipulationist account of causation is inadequate, since many causal verbs are well outside the scope of agential manipulation. However, contemporary manipulationist accounts of causation have addressed this worry, and it is beyond the scope of this dissertation.⁴ Fortunately, Aronson’s clear presentation of the grammar of ‘cause’ is illuminating for present purposes.

If causation is relational, then so are each of the specific causal transitive verbs. A counterexample, a non-relational causal verb, would settle the issue and demonstrate that causation is not essentially relational. However, no counterexample is readily available. If an object is kicked across the room, there must be a *kicker*. The entailment from ‘an object is kicked’ to ‘something kicked an object’ holds in virtue of the relational nature of kicking. The same can be said for each of the causal verbs so far mentioned, and, it seems, the same could be said for any such verb.

the same conversion. In other words, transitive verbs such as ‘know’, ‘see’, etc. are not really factitive verbs, and the objective complements in these cases do not really denote any significant change in the object that is due to such things as ‘seeing’ and ‘knowing.’ Aronson, see n. 1: 418.

4. See: James Woodward, *Making Things Happen: A Theory of Causal Explanation* (New York: Oxford University Press, 2003); Judea Pearl, *Causality: Models, Reasoning, and Inference* (New York: Cambridge University Press, 2000).

However, it does not follow from the absence of a counterexample that causation is essentially relational. Even if we succeeded in cataloging every causal verb and determined each to be relational, we could not catalog every possible causal verb. However, the absence of a counterexample and many clear examples of relational causal verbs provides a strong prima facie case for the relational nature of causation. Causation is but a general term for a collection of functionally similar transitive verbs — a collection composed of essentially relational verbs.

2.2 The Case Against Non-Relationalism

In spite of the prima facie case for relationalism, the claim that causation is essentially relational is defeasible. David Lewis argues that the inability to account for negative causation in a relationalist framework is evidence against relationalism.⁵ Lewis offers a non-relationalist alternative. His provides the crucial feature of non-relationalism: Causation does not always relate entities.

As we have seen, commonsense is inclined to judge that absences often cause and are often caused. However, if causation is relational, then causal claims require a noun phrase, a direct object, and an objective complement. That is, causal claims require *things* as cause and effect. For cases of negative causation, one or both of the required *relata* are missing. In spite of this, Lewis grants evidential weight to our commonsense judgments about negative causation. We can cite many examples where absences seem to play the very same causal role as uncontroversial occurrences. Consider an example, ‘Smoking causes heart disease.’ Since smoking likely prevents the normal function of the heart, the effect of smoking is an *absence* — an absence which also seems to have a variety of effects, like death. The upshot

5. Lewis, “Void and Object,” see n. 2; Lewis, “Causation as Influence,” see n. 1.

is that heart disease is really just an absence, a non-entity, which we, nevertheless, judge to be a genuine effect of smoking. Lewis argues that,

We could deny, in the face of compelling evidence to the contrary, that absences ever cause anything. We could deny, for instance, that the void is deadly... Simply to state this response is to complete the *reductio* against it.⁶

Thus, if relationalism entails that there is no negative causation, then the evidence in favor of negative causation is sufficient to warrant the denial of relationalism.

In light of the tension between the relational account of causation and our commonsense judgments that negative causation is genuine causation, Helen Beebe notes three possible solutions.⁷ The first solution, which she accepts, maintains the relationalist model and denies that absences are causes. The second solution rejects the relationalist model in favor of non-relationalism where causation is not essentially relational and affirms our commonsense judgments that absences are often causes and effects.⁸

The third solution, which is suggested and rejected by Lewis in “Void and Object,” attempts to reconcile the relationalist model with our commonsense judgments. On this approach, one would claim that the most basic causal facts are relational and then attempt to define negative causation in terms of relational causation. If we opt for this option as Lewis describes it, then absences are really just uncontroversial everyday objects. For instance, holes are just made of their surroundings. “Strange to say,” Lewis notes, “some holes are made of cheese and some of limestone! Strange to say, no holes are exactly where we would have thought they were!”⁹ Put this way, this option is clearly unacceptable. However, this

6. Lewis, “Void and Object,” see n. 2: 281.

7. Beebe, see n. 1.

8. This is the solution developed in Lewis, “Causation as Influence,” see n. 1.

9. Lewis, “Void and Object,” see n. 2: 282.

is only one way of reconciling the relationalist model with our intuitive judgments. On the strategy sketch in later chapters, we might say that an absence is a cause or an effect just in case such a negative causal statement has as its truthmaker uncontroversial, causally related entities. More on this later. (In short, I find Lewis's rejection of the third solution to quick.)

In "Causing and Nothingness," Beebe's central contention is that, for commonsense's part, it doesn't much matter whether we choose the relational or the non-relational view. She argues that neither view respects our commonsense judgments about negative causation. The relationalist straightforwardly denies that many intuitively causal absences are causes. Consider one of Beebe's examples. Jones was supposed to close the fire door; he fails to do so and a fire results. Commonsense judges that Jones's failure is a cause of the fire. The relationalist holds commonsense in error.

However, the non-relationalist view affirms that many absences are causes when commonsense would judge that they are not. On Lewis's account, for example, causation is the ancestral of counterfactual dependence. In light of this, Beebe continues the Jones example to consider Brown, who lives on the other side of the city and also fails to close the fire door. Since the fire wouldn't have occurred if either Jones or Brown had closed the fire door, the failures of both are equally causes on the non-relationalist view. However, commonsense would deny that Brown's failure is also a cause. The moral of the story is that both views, relationalism and non-relationalism, fail to respect commonsense.

If we give commonsense judgments the sort of evidential status that Lewis does, then non-relationalism is no better off than relationalism. We can apply Lewis's *reductio* to non-relationalism as well. We could deny, in the face of compelling evidence to the contrary, that people who don't close fire doors in other cities cause fires in those cities. This, it seems, completes the *reductio* against non-relationalism. The success of this version

of Lewis's *reductio* against his own account crucially depends on the claim that non-relationalism fails to respect commonsense. In the next section, I look more closely at Beebee's defense of this claim.

2.2.1 No Respect for Commonsense

The desideratum for non-relationalism is the preservation of our commonsense causal judgments. We have a body of evidence that absences are often causes and effects. Consider our earlier examples: Smoking causes an absence of proper heart function and droughts — an absence of rain — cause forest fires and poor harvests. But we have an equally compelling body of evidence that not all absences are causes: My failure to irrigate distant drought stricken fields is not a cause of poor harvests in far off lands.

This is where Beebee sets her hooks against non-relationalism. Beebee argues that commonsense judgments are very often tainted with normative considerations, considerations that make no metaphysical difference. Commonsense denies that Brown's failure to close the fire door caused the fire because there is no sense in which Brown should have closed the door. Jones, on the other hand, should have. If Beebee has diagnosed our commonsense judgments correctly, then metaphysicians do not have to respect them. Beebee puts the point thusly, "But no philosopher working within the tradition I'm concerned with here think that the *truth* conditions for causal claims contain a moral element."¹⁰¹¹ Beebee concludes that any metaphysical theory of causation must reject some commonsense judg-

10. Well, almost no philosophers. Sarah McGrath develops an account according to which the truthmakers for negative causal claims are essentially normative. Sarah McGrath, "Causation By Omission: A Dilemma," *Philosophical Studies* 123, no. 1-2 (2005): 125–148.

11. Beebee, see n. 1, 293.

ments and that relationalism and non-relationalism merely differ about which judgments to respect.

To further her case against non-relationalism, Beebee attempts to formulate a definition of non-relational negative causation. The moral is that that commonsense judgments about which absences are causes and which are not depend on factors that are implausible metaphysical considerations. To begin, she offers a simple counterfactual definition of causation by an absence:

The nonoccurrence of an event type *A* caused event *b* if and only if, had an *A*-type event occurred, *b* would not have occurred.¹²

If we consider paradigm cases of absences as causes that commonsense judgments are likely to consider cases of genuine causation, the above definition tracks commonsense. Beebee consider four such examples.¹³

1. Flora normally waters her neighbor's flowers. But Flora stops watering them and they die. Commonsense affirms that Flora's failure to water the plant is a cause of their death.
2. Zeb's dog is bitten by an insect and contracts an eye disease. Zeb neglects the dog and does not treat the disease and the dog goes blind. Commonsense affirms that Zeb's negligence is a cause of the dog's blindness.
3. A decaying tree falls in a national forest and destroys some rare wild flowers. The park ranger failed to inspect the tree. Commonsense affirms that the park ranger's failure caused the death of the wild flowers.

12. Beebee, see n. 1: 294.

13. Ibid.: 294.

4. A tropical plant survives a London winter because it was abnormally warm and there was no frost. Commonsense affirms that the lack of frost caused the plant's survival.

The above definition satisfies our commonsense judgments about each of previous four cases. But the definition also applies to a host of absences that are not intuitively causal. For the first example, if we count Flora's failure to water the flowers as a cause of their death, we must also count the other neighbors' failures to water the flowers — not to mention the failures of people in foreign countries. For the second example, if we admit Zeb's negligence as a cause, we must also consider the failures of everyone else who didn't treat the dog as a cause of his blindness. Similarly, I didn't inspect the tree in the national forest and a gust of wind didn't blow the decaying tree the other direction. And my inspection and the gust of wind would have prevented the death of the rare wild flowers. Beebee continues for the fourth example: if the absence of frost caused the survival of the tropical plant, then so did the absence of a hungry tropical plant-eating koala.¹⁴ But none of these absences are intuitively considered causes.

In order to weed out spurious causal absences, we must introduce additional criteria. A standard such criterion is suggested by Hart and Honoré¹⁵ Call this the *abnormality criterion*: The non-occurrence of an event type *A* caused event *b* if and only if, had an *A*-type event occurred, *b* would not have occurred and event type *A* normally occurs. This gives the right result in our paradigm examples. Flora's failure to water the flowers is a cause of their death because she normally waters them; everyone else's failure is not a

14. Beebee, see n. 1: 295.

15. H.L.A. Hart and Tony Honoré, *Causation in the Law* (New York: Oxford University Press, 1985).

cause since they do not normally water the flowers. Similarly for our other absences. No one expects to see a tropical-plant-eating koala in London, but we do expect frost.

However, Beebee argues that abnormality criterion flies in the face of many other commonsense judgments, even though it does well by our for paradigm cases. Commonsense judges Zeb a cause of the dog's blindness even if Zeb is normally negligent. Here we must appeal to a moral norm. Zeb's history of care notwithstanding, he should have taken care of his dog's health. In other cases, the norm is epistemic. If a drug manufacturer produces a drug with a serious side effect that the manufacturer could not have foreseen, we would not consider the manufacturer's failure to warn users of the side-effect a cause of the malady.

Beebee argues that these considerations prompt a more complicated definition of causation by absence:

- (II) The nonoccurrence of an event type *A* caused event *b* if and only if
 - (i) *b* counterfactually depends on the absence: Had an *A*-type event occurred, *b* would not have occurred; and
 - (ii) the absence of an *A*-type event is *either* abnormal *or* violates some moral, legal, epistemic, or other norm.¹⁶

This definition seems to get the analysis of our commonsense judgments about absences as causes right. However, Beebee claims that it is hardly satisfactory as a metaphysical account of causation. If correct, the truth conditions of causal statements would depend crucially on human-dependent norms. While this might be bad enough to damn the commonsense approach to metaphysics, Beebee notes that the revised definition would make the truth of causal statements a relative matter. We might differ with regard to our epistemic norms. But even if there are objective epistemic norms, it would nonetheless make causation relative to a particular set of norms. The absence of some event might be a genuine cause given some set of moral norms, but not a genuine cause given some other set

16. Beebee, see n. 1: 296.

of norms. Though Beebe does not explicitly give an example to this effect, we have one easily at hand. If Zeb is normally negligent, then his failure to treat his dog's eye condition is not abnormal and hence not a cause of the dog's blindness in one sense, but it is a cause if we consider a set of moral norms, which prescribe that he ought to have tended to his dog's health.

The upshot is that our commonsense judgments about absences as causes can only be vindicated by a metaphysical theory that relativizes causation to a motley set of norms. And this, Beebe maintains, is wholly unacceptable. Hence, any metaphysically acceptable account of absences as causes must revise our commonsense judgments. Either the relationalists have it and there are no absences as causes, or the non-relationalists have it and there are far more than commonsense suggests.

2.2.2 A lifeline for the non-relationalist

At this point, we are left to think that both relationalism and non-relationalism fail to respect our commonsense judgments. Commonsense judges that Zeb's failure to care for his dog caused the dog's blindness, but my failure didn't (after all, I've never met Zeb or his dog). The simple version of non-relationalism endorses just the counterfactual condition: the absence of an A-type event causes some event b just in case, if an A-type event had occurred, then b wouldn't have. And this version runs afoul of commonsense; if the simple version is correct, then my failure to care for Zeb's dog also caused the dog's blindness. Reigning in commonsense by appealing to normative considerations doesn't help — so much for respecting commonsense. And this is bad because respecting commonsense judgments is the primary motivation for the non-relationalist move.

But non-relationalists need not be content with either the simple or normative version. A more refined non-relationalist view might do better by commonsense by invoking a second, non-normative condition. Beebee introduces a third candidate definition:

- (III) The absence of an A-type event caused b if and only if:
(i) if an A-type event had occurred, b would not have occurred; and
(ii) an A-type event occurs at a world that is reasonably close to the actual world.¹⁷

This definition is more metaphysically plausible than the normative version. Considerations about abnormality and epistemic and moral norms do not constitute the truth conditions for causal statements. Rather, reference to abnormality and other norms inform our judgments about the nearness of worlds.

Beebee offers two objections to this definition. First, reconsider the case of Zeb and his dog. Commonsense would insist that Zeb's failure to care for his dog's health is a cause of the dog's blindness, even if Zeb has no disposition to care for his dog. Zeb may exhibit such a disregard for his dog's health that it is more likely that an animal control officer would have removed the dog from Zeb's care than it would be that Zeb took his dog to the veterinarian. Thus, the world where an animal control officer intervenes is nearer to the actual world than the world where Zeb cares for his dog properly. Yet, commonsense is still disposed to call Zeb's failure, not the absence of the animal control officer's intervention, a cause of the dog's blindness. Beebee puts this objection thusly, "I take it that common sense simply doesn't endorse the view that if you're negligent enough... your negligence literally won't have any effects."¹⁸

17. Beebee, see n. 1: 298.

18. Ibid.: 299.

Beebee's second objection bears directly on the adequacy of the (ii) condition. She argues that there is no plausible metric available to determine the nearness of possible worlds. While we might be able to judge relative similarity, we are unable to firmly specify what counts as "reasonably close" to the actual world. What counts as 'reasonably close' in some cases will be judged distant in others. Thus, any effort to impose a metric on the nearness of worlds is bound to be arbitrary.

Beebee claims that these considerations prompt a general problem for any account of absences as causes. She writes,

There just *isn't* any objective feature that some absences have and others lack in virtue of which some absences are causes and others are not. So *any* definition of causation by absence that seeks to provide a principled distinction between absences that are and are not causes is bound to fail: No such definition will succeed in carving nature at its joints.¹⁹

What drives this assertion is the assumption that absences simply *don't have objective features*. If this assumption is right, then it follows quite easily that there are no objective features of absences that some have and others lack. *A fortiori*, such features cannot ground causal truths concerning absences. Elsewhere in the dissertation, I argue that we ought to question this assumption. Our commonsense judgments track what people take to be the causal powers of what are commonly called 'absences.' We shouldn't be overly concerned with the status of what the metaphysician calls absences — objects or events, which, quite literally, do not exist. Rather, we should determine whether what we intuitively label 'absences' have any objective features. For the moment, I table this investigation. In Chapter 3, I consider the positive account that Beebee provides to show that relationalism does better by commonsense. She argues that intuitive judgments about negative causation really

19. Beebee, see n. 1: 300.

track judgments about causal explanations. She argues that absences can causally explain, even though they cannot cause. In the next section, I consider the explanations of error offered by the non-relationalist.

2.2.3 Explanations of Error

The moral of the previous section is that both relationalism and non-relationalism must reject some evidence afforded by our commonsense judgments. The relationalist must reject our evidence for negative causation; the non-relationalist must reject our evidence against certain spurious cases of negative causation. Sarah McGrath has recently put the problem in terms of a dilemma: “Either there is no causation by omission, or there is far more than common sense says there is.”²⁰ Relationalism suffers the first horn and non-relationalism the second. Beebe claims that this is just so much the worse for commonsense, but both the relationalist and the non-relationalist owe some explanation for the errors each attribute to commonsense. After all, if we are going to leave a significant body of evidence out of our analysis, we need some reason for leaving it out. To do otherwise is *ad hoc*. In this chapter, I deal primarily with the explanations of error offered in favor of non-relationalism. In Chapters 3 and 4, I address explanations of error offered by relationalists.

The problem for non-relationalists is that they are forced to recognize far more negative causation than commonsense is inclined to accept. For example, if I fail to water my houseplant and it dies, commonsense judges that my failure caused the death. However, commonsense would deny that President Obama’s failure to water the houseplant also caused its death. Following Jonathan Bennett, David Lewis asserts that President Obama’s

20. McGrath, “Causation By Omission: A Dilemma,” see n. 10.

failure to water the houseplant caused its death is infelicitous to utter, but it is a true assertion nonetheless.²¹

For Bennett in particular, the infelicity is due to considerations of salience. Facts about Obama's failure to water the plant aren't salient in the context of our current example. In similar fashion, Lewis adds that many true propositions are inappropriate to assert if they are irrelevant, known to all concerned, etc.²² On the Lewis-Bennett approach, the difference between my and President Obama's causal influence on the death of the houseplant is pragmatic, not metaphysical.

The appeal of this approach for explaining commonsense error is that it is purportedly consistent with general pragmatic considerations. Even in uncontroversial cases of positive causation, we frequently refrain from citing certain causes. If an unattended cigarette causes a house-fire, we don't bother to mention the oxygen in the air, even though the presence of oxygen is certainly a cause of the fire. Furthermore, it seems that the case of causation doesn't require anything special in addition to standard Gricean pragmatics.

In his defense of the causal theory of perception, Grice explains why it is often inappropriate to utter something true:

When someone makes such a remark as "It looks red to me" a certain implication is carried, an implication which is disjunctive in form. It is implied either that the object referred to is known or believed by the speaker not to *be* red, *or* that it has been denied by someone else to be red, *or* that the speaker is doubtful whether it is red... [T]here would be something at least *prima facie* odd about my saying "That looks red to me" (not as a joke) when I am confronted by a British pillar box in normal daylight at a range of a few feet.²³

21. Jonathan Bennett, *The Act Itself* (New York: Clarendon Press, 1995); Lewis, "Causation as Influence," see n. 1.

22. Lewis, "Causation as Influence," see n. 1: 196.

23. Grice, see n. 7: 124.

Of course, the British pillar box does look red. But given that it is red and everyone expects it to be red, it would be conversationally inappropriate to say that it looks red. However, Sarah McGrath has argued — quite rightly — that the non-relationalist and Grice need to explain different things:

So the datum Grice seeks to explain is that we do not utter certain truths, not that we do utter certain falsehoods, and he is right about the datum.²⁴

The non-relationalist's burden is not to explain why we refrain from uttering certain truths. The problem is that we *do* utter certain falsehoods. We certainly do refrain from saying that Obama's failure to water the plant caused its death, but, more importantly, *we deny that his failure is a cause*. The non-relationalist cannot merely apply Grice's pragmatic account to the spurious cases of negative causation. Rather, the non-relationalist needs to explain why we say false things, not why we merely refrain from saying true things. The latter is easy, and the former is never undertaken.

2.3 Conclusion

Nothing in the forgoing chapter fully refutes non-relationalism. Rather, I have clarified the prima facie case for relationalism. We most naturally regard causation as a relation, and the specific causal verbs are clearly relational. Given this, it would be quite odd if there causation managed not to relate entities whenever the need arises. How strange that causation relates entities except when there are no entities to relate!

I have also outlined the basic case against non-relationalism. Non-relationalism creates as many problems as it handles. If we take seriously our commonsense evidence that

24. McGrath, "Causation By Omission: A Dilemma," see n. 10: 132.

absences often cause and are often caused, then we should also take seriously our commonsense evidence that Obama's failure to water my houseplant did not cause it to die. Removing the requirement that causation must relate entities also removes limits on what counts as causation. The non-relationalist suffers an explosion of causes. Lewis recognizes this explosion; he also recognizes that we should be able to explain why we don't recognize spurious instances of causation. We do not count Obama's failure as a cause of my houseplant's death. But the explanation at hand — pragmatics — is ill-suited for this task. The explosion is left without an adequate explanation.

All this serves to motivate the account that I develop in subsequent chapters. The inconsistency of relationalism and genuinism, I will argue, is merely apparent. Thus, the rejection of negative causation by relationalists is unnecessary, and the rejection of the relational nature of causation by non-relationalists is a solution in need of a problem. We can have our cake and eat it too: causation relates entities and negative causal statements can be true and express genuine causal relations.

Chapter 3

No Negative Causal Explanation Without Negative Causation ¹

At this stage, it should be clear that the standard relationalist accounts must attribute widespread error to commonsense. But so must the standard non-relationalist accounts. Either there is no negative causation, or there is a lot of it. *A whole lot of it, perhaps an infinite supply.* So commonsense either errs in judging that there is some negative causation, or commonsense errs in judging that there is a limit to it. On both sides of the divide, we are owed some explanation for our error. In virtue of what does commonsense get causation so wrong when it comes to absences?

In the previous chapter, I demonstrated that the explanations of error by the non-relationalist are wanting. The non-relationalist appeals to pragmatics won't do. Even if pragmatics can be employed to explain why we refrain from uttering certain truths, it is not clear that pragmatics can equally explain why we do utter falsehoods. Thus, if it is true that Obama's failure to water my houseplant caused it to die, we have no explanation for our emphatic denial of that truth. At least, that explanation won't come from the domain of pragmatics.

1. Portions of Chapter 3 were presented at the 2010 Pacific Division Meeting of the American Philosophical Association.

Perhaps a relationalist explanation of error will fare better. According to relationalism, it is false that Obama's failure to water the houseplant caused it to die. But it is also false that my failure to water it caused it to die. The relationalist also must explain this error, after all, we readily affirm that my failure is a cause of the houseplant's death.

Helen Beebee and Achille Varzi have recently argued that commonsense is insensitive to the distinction between causation and causal explanation. For cases of positive causation, causal claims and causal explanations coincide, hence the insensitivity does not result in mistaken causal judgments. But in putative cases of negative causation, there is no coincidence: Absences can casually explain events, but cannot cause or be caused. Therefore, commonsense errs with regard to negative causation alone.

The Beebee-Varzi approach is attractive, since it preserves the relational view of causation, yet explains why commonsense is prone to systematic error. However, I argue that the approach fails, but in instructive ways. In this paper, I argue that absences cannot figure into causal explanations, unless absences specify causes, if only generally. But, if absences specify causes, then negative causal claims can be true. And this, I maintain, is enough to vindicate our commonsense judgments about negative causation. Thus, negative causation does not pose a special problem for our account of causation. The problem is merely apparent.

3.1 Absences and Causal Explanations

Recall from the previous chapter that, as Beebee sets up the problem, *any* metaphysically plausible account of causation must reject some class of our commonsense judgments. The relationalist must reject all negative causal judgments, and the non-relationalist must accept far more negative causation than commonsense recognizes. In either case, we have

a tendency to assert falsehoods, and this tendency deserves explanation. Returning to the fire example, the relationalist should explain why we assert that Jones is a cause of the fire when he isn't, and the non-relationalist should explain why we assert that Brown isn't a cause of the fire when he is.

Having rejected the pragmatic explanation of the non-relationalist, I now consider Beebee's explanation. She argues that our tendency to affirm false negative causal judgments issues from a confusion. The idea is that causal claims normally coincide with causal explanations for uncontroversial cases of positive causation. For example, if a cigarette causes a house-fire, it is also true that the house-fire occurred because of the cigarette. Coincidence of causal claims and causal explanations is so ubiquitous, Beebee claims, that we typically fail to notice the difference and move readily from one to the other:

I say that common sense is just mistaken when it asserts that an absence or an omission *caused* some event. It's not an especially bad mistake. Often we move between the "*E* because *C*" and "*c* caused *e*" locution without going wrong: It doesn't much matter whether I say "the match lit because I struck it" or instead "my striking the match caused it to light..." Often causal explanations go hand in hand with causal relations between events. Often but not always.²

If Beebee is right, then when we assert a negative causal claim it is always false, yet it is unsurprising that we assert it. In order for this explanation of commonsense mistakes to succeed, Beebee must: *a*) Give reason to think that we actually confuse causation with causal explanation; *b*) Establish a distinction between causation and causal explanation; and, *c*) Demonstrate that causally inert 'absences' can causally explain.

Beebee starts with Davidson's distinction between causation and causal explanation. On Davidson's view, *causation* is a relation among events, and so absences are not the

2. Beebee, see n. 1: 305.

sorts of things which can enter (since they are not *things* at all). However, as Davidson claims, “Explanations typically relate statements, not events.”³ This opens the door for the possibility that absences, which are not causally efficacious, are causally explanatory. The idea is that while absences cannot *cause* things to happen, they can often *explain* why things happen. Whereas causation is a relation among entities, explanations are relations among statements, and statements about absences are well-suited for this.

This is important for Beebe’s account, since it gives the relationalist something to say out our commonsense judgments that absences are sometimes causes. Intuitively plausible statements of the form, “The absence of *x* caused *y*” are always false, but there is a nearby explanatory statement that is true, ‘*Y* because there is no *X*’ Even though Jones’s failure to close the fire door is not a cause of the fire, his negligence may *causally explain* the fire. For this approach to work, Beebe must show that causally inert absences can figure into true causal explanations.

To show this, Beebe endorses David Lewis account of causal explanation. Lewis’s central thesis is that, “to explain an event is to provide some information about its causal history.”⁴ According to Lewis, one way to provide information about some event’s causal history is to cite its particular causes. But this is not the only way. An explanation may only cite an existential statement. For instance, we might explain a murder by saying that someone shot the victim. On the face of it, this does not specify a cause of the murder, but it tells us something about the causal history of the murder, namely that it was caused by a shooter. There is a wide range of information about the causal history of an event that

3. Donald Davidson, *Essays on Actions and Events* (New York: Oxford University Press, 2001): 159–160.

4. David Lewis, *Philosophical Papers: Volume II* (Oxford: Oxford University Press, 1986): 217.

can causally explain, including negative information. We might further provide information about the causal history of the murder by saying that Jones wasn't the shooter.⁵

But just what causal information do absences provide? Following Lewis, Beebe claims that absences provide a minimal kind of causal information, they tell us what isn't in the causal history of the *explanandum*. Additionally, talk of absences provides a kind of modal information. They tell us how the causal trajectory would have gone had the absence occurred. And this, she claims is causal information. So absences causally explain without being causes.

If Beebe is correct about this much, then absences can explain without being causes. Beebe must further show that commonsense confuses negative causal claims with negative causal explanations. She claims that the confusion has its source in the way we talk about absences. We very often speak of absences as if they are things — events or objects. We often talk of the void — as Beebe points out in reference to Lewis's "Void and Object" — as if it is an entity. However, there is no object in the world picked out by the locution. The void is nothing at all. Locutions such as this — we could include talk of the void or of negligence — engender confusion. As Beebe notes, "Absences, omissions, and failures get assimilated to the familiar ontological category of events even though they are *not* events."⁶ This ontological assimilation underlies the confusion between causation and causal explanation. Normally, causal explanation refers to events in the causal etiology of the explanandum, and so the causal explanation involves causal claims. Since we often talk about absences as if they were events, we mistakenly conflate causal explanations involving absences with causal statements involving absences. This is unproblematic with positive

5. Lewis, *Philosophical Papers: Volume II*, see n. 4: 219—220.

6. Beebe, see n. 1: 304.

causation and corresponding causal explanations. But when we do it with absences, it generates a mistake. But, she thinks, the mistake is innocuous enough. For metaphysics part, however, we should not take our tendency to treat absences as causes as evidence that they are causes.

With these basics in place, we can reconstruct Beebee's central argument:

Absences are neither causes nor effects, thus negative causal statements are false. However, citing an absence can causally explain an event without specifying any causes of that event. Therefore, there are true negative causal explanations that do not coincide with true negative causal statements. Commonsense is insensitive to the distinction between causation and causal explanation. Therefore, commonsense mistakenly judges that some absence *A* causes event *E* when citing *A* causally explains the occurrence of *E*.

In the next section, I refute two of Beebee's crucial premises. First, empirical evidence undermines the claim that commonsense is insensitive to the distinction between causation and causal explanation. A recent study suggests that commonsense is sensitive to the distinction between causation and causal explanation. Thus, Beebee's explanation of our tendency to affirm false negative causal judgments fails. We can tell the difference between causation and causal explanation. Since we don't fail to draw the distinction, supposing that we do doesn't explain anything.

Next, and perhaps more critical, I argue that citing an absence can causally explain an event without specifying any causes of that event. Causal explanations must specify causes, if only generally. An account of causal explanation that weakens this requirement succumbs to counterexamples. Furthermore, in prevention cases, absences *must* specify causes, or else there is *nothing* to explain. In what follows, I refute Beebee's empirical claim, then I address the account of causal explanation she adopts to show that causal explanations require the specification of causes and effects.

3.2 Absences and Causal Explanations Revisited

3.2.1 Empirical Considerations

In a recent study, Jonathan Livengood and Edouard Machery test the following prediction, following Beebee's hypothesis that the folk fail to discriminate between causal explanation and causation:

People should agree equally with sentences asserting that an event e took place because an absence a obtained and with sentences asserting that the absence a caused the event e , when a is a relevant absence in the causal history of e .⁷

The goal is to empirically test Beebee's claim that people fail to notice the distinction between causal claims and causal explanations. Recall that this claim is crucial to the success of Beebee's proposal. Confusing causation with causal explanation is supposed to explain why people make false causal claims. If people successfully discriminate between causation and causal explanation, then Beebee's proposal is undermined.

Livengood and Machery developed three cases to test the above prediction. These tests are listed below as they are presented in (Livengood and Machery, "The Folk Probably Don't Think What You Think They Think: Experiments on Causation by Absence."):

Experiment 1: The Rope Case

"Susan had to climb a rope in gym class. Susan was a very good climber, and she climbed all the way to the rafters."

Experiment 2: The Broken Rope Case

"Susan had to climb a rope in gym class. Susan was a very good climber. She started climbing, but the rope broke before she reached the rafters. She fell on the ground."

Experiment 3: The Unsafe Rope Case

7. Jonathan Livengood and Edouard Machery, "The Folk Probably Don't Think What You Think They Think: Experiments on Causation by Absence.," *Midwest Studies In Philosophy* 31, no. 1 (2007): 115.

“Susan had to climb an old, worn-out rope in gym class. She wondered if it would support her weight. Susan was a very good climber. Though nervous, she climbed all the way to the rafters.”

In each experiment, individuals were randomly assigned to either the causal condition or the explanation condition and presented with the description of the relevant experiment given above. Those in the explanation condition group were given a causal statement relevant to the particular experiment. Those in the causal condition group were given a causal statement. Each individual was then asked to assess, on a scale from 1 to 7 how much they agreed or disagreed with a given statement (1 indicating total disagreement and 7 indicating total agreement)

Experiment 1 straightforwardly tests the prediction. For the explanation condition, individuals were asked to rate their level of agreement their response with the following statement: ‘Susan reached the rafters because the rope did not break.’ For the causation condition, individuals were asked to rank, on the same scale, their response to the following statement: ‘The rope not breaking caused Susan to reach the rafters.’

The results of experiment 1 suggest that subjects did not consider the rope’s not breaking a cause of Susan’s reaching the rafters. (The mean response to the causal condition was 2.73.) Furthermore, subjects were only slightly more inclined to agree with the statement in the explanation condition. (The mean answer to the explanation condition was 3.5.) In this case, the absence of the rope breaking was not judged a cause or a causal explanation of Susan reaching the rafters.

The results of experiment 2 indicate that subjects were just as likely to agree with the causal question as the explanatory condition. Both groups judged that the rope breaking

both caused and causally explained Sue falling to the ground. (The mean answer for the causal condition was 5.77; the mean answer to the explanatory condition was 5.47.)

Finally, we might think that the results of experiment 1 can be accounted for because in the Rope Case, there is no reason to think that the rope might break. Thus, the absence — the rope not breaking — is not salient. This may explain the tendency to disagree with both the causal and the explanation condition. To test for this possibility, Livengood and Machery ran experiment 3, where the possibility of the rope breaking is made explicit.

In experiment 3, which was modeled after experiments 1 and 2, subjects in the explanation group were given the following statement: ‘Susan reached the rafter because the rope did not break.’ The subjects in the causation group were given this statement: ‘The rope not breaking caused Susan to reach the rafters.’ The results of experiment 3 indicated that subjects more likely to agree with the explanation question than the causation condition. (The mean answer for the causal condition was 3.06; the mean answer to the explanatory condition was 4.00.) Here it is suggested that subjects are not inclined to judge that the rope not breaking is either a cause of or a causal explanation for Sue reaching the rafters.

The combined results of these experiments suggest that subjects successfully make the distinction between causation and explanation. Subjects were more prone to agree with the explanation question than the causation question in both experiments 1 and 3, suggesting that the two are not commonly conflated. This is trouble for Beebe’s proposal. Early on, she writes, “I claim that commonsense judges some absences to be causes because it fails to distinguish between causation and causal explanation.” Later, she claims that “Like the distinction between events and absences, the distinction between a true explanation — a true ‘because’ statement — and an adequate explanation is one that common sense has a

tendency to ignore.”⁸ Unfortunately, we have evidence that commonsense is sensitive to the distinction.

The study has another, more unexpected result. As Livengood and Machery note, it also suggests that people are not obviously inclined to consider absences to be either causes or explanatorily relevant. The favorable response to the causal condition for experiment 1 and 3 was quite weak, suggesting that the intuition that absences are causes is not as widespread as philosophers assume. Furthermore, the responses to the explanatory condition for experiments 1 and 3 were only slightly higher than the respective responses to the causal condition. All in all, the responses to both the explanatory and causal conditions were middling.

What should we make of this result? It might be tempting to say that the findings suggest that the debate about absences as causes is under-motivated. If the folk don't readily assert that absences are sometimes causes, then we needn't worry about preserving the possibility. This would be, of course, good news for the relationalist: There is no data in need of explanation. But dismissing the problem in this way is too quick. No doubt, in experiment 1, subjects were not inclined to regard the rope not breaking a cause. But once the possibility of the rope breaking was made salient, the inclination to judge the rope not breaking a cause increased. If there was no problem, we shouldn't expect to see any change. More empirical research is required to discover just how far this goes. If Livengood and Machery's experiment was such that the rope was on its last thread, we might see an even greater tendency to judge that it not breaking is a cause of Susan reaching the rafters. At this stage we cannot reject this possibility, and the data does suggest that the tendency to judge an absence a cause increases with the increase of the absence's salience.

8. Beebe, see n. 1: 293, 307.

Fortunately, intuitions about unbroken ropes notwithstanding, we don't need to look very far to find absences that are readily considered causes. A quick search of MEDLINE reveals that neglect — a caretaker not doing something — is accounted a primary cause of a variety of events. For instance, neglect is often cited as a primary cause of suicidal behavior. Brodsky and Stanley (2008) note that,

Childhood abuse and neglect are among the many etiologic factors in the development of suicidal behavior. Childhood abuse and neglect are more likely to occur in families characterized by a range of adversities that might also contribute to the development of psychopathology, such as familial conflict, parental psychopathology, and suicide attempts in abusing parents. There is strong evidence for a robust relationship between childhood abuse/neglect and suicide, even when controlling for other environmental variables.⁹

Here Brodsky and Stanley place neglect squarely within the causal history of suicidal behavior. This is important if we are to shake the feeling that negative causation is a chimera. The results of Livengood and Machery's study might lead us to believe that people don't think that absences are causes. After all, the favorable responses to the causal condition for both experiment 1 and 3 were quite weak. However, the above passage from Brodsky and Stanley show that clinicians and scientists are inclined to regard absences as causal. Even if people don't think that a rope not breaking is ever a cause, people do think that neglect is. We should not be tempted to dismiss the problem of negative causation on the basis of Livengood and Machery's study alone.

3.2.2 No causal explanation without causation

For cases of neglect, Beebe and like-minded theorists would have it that parental neglect does not cause, but merely explains, suicidal behaviors. The folk, scientists, and clinicians

9. B.S. Brodsky and B. Stanley, "Adverse Childhood Experiences and Suicidal Behavior," *The Psychiatric Clinics of North America* 31, no. 2 (2008): pg. 223.

just mistake neglect for a cause. The reason for this mistake is the confusion of causation and causal explanation. Livengood and Machery have given us reasons to doubt that such confusion exists, but the results of their study are not conclusive.

Here I leave the status of Beebee's empirical premise an open question. More central to our present concern is Beebee's claim that absences can causally explain without being causes. I argue that Lewis's account of causal explanation, which Beebee utilizes for this purpose, is inadequate unless absences specify causes. Of course, if absences specify causes, then negative causation is genuine causation.

On Lewis's account, a causal explanation only needs to provide some information about the causal history of an event. This information can be very specific or very general. Lewis openly admits that his account of causal explanation is permissive. For example, a doctor could very well explain the sedative effect of an opiate by claiming that the opiate has a 'dormative virtue.' It may not be much of an explanation, but it at least tells us something about the causal history that leads to the sedative effect: we know that the marketer of the opiate didn't sneak in and administer some other depressant so that the opiate *looks* like it has a sedative effect.¹⁰

The permissibility of Lewis's account might be enough to cause many philosophers to reject it. But I argue that even if we are willing to accept its admitted permissibility, further analysis reveals that it is even much more permissive than Lewis thinks. If we accept Lewis account of causal explanation, then nearly anything can provide information about the causal history of nearly any event.

This result is deeply problematic for Lewis's account because his is supposed to be better than the deductive-nomological (D-N) model of explanation. That is, there are standard

10. Lewis, *Philosophical Papers: Volume II*, see n. 4: 221.

examples that, according to the D-N model, count as explanations, but aren't. If Lewis account is to succeed, then it had better give the right verdict with regard to those examples. If Lewis's account fails to do so, then it is not an adequate account of causal explanation. I argue that Lewis's account of causal explanation falls to the very same counterexamples that fell the D-N model.

According to the D-N model of explanation, an explanation is an argument that has as its premises at least one law-like sentence and other sentences specifying the prior conditions such that the premises entail the *explanandum*. The counterexamples to D-N are well-known, and Lewis notes versions of each of the following and a few others:

1. A building casts a shadow. Laws about the linear propagation of light and facts about the length of the shadow entail the height of the building. But the length of the shadow doesn't explain the height of the building.
2. Laws of atmospheric pressure and relevant facts about the reading on a barometer entail facts about particular weather events. But the reading on a barometer doesn't explain the weather.

I have chosen to focus on these two counterexamples because they share a certain feature. We think these are not explanations — even though we can construct perfectly good D-N arguments for each — because they flaunt the asymmetry of causation. The length of a flagpole's shadow can't explain the height of the flagpole because shadows don't cause flagpoles. So too with barometric readings; they don't cause barometric events. Both examples have the causal sequence backwards.

Lewis addresses these examples because he needs to show that in cases where D-N arguments appear to be explanatory they provide causal information, and in cases where D-N

arguments do not appear explanatory they do not provide causal information. Causal information, Lewis thinks, makes the difference between an explanation and a non-explanation. However, I argue that our counterexamples do provide some causal information in Lewis's sense, yet they are not explanatory. Thus, providing mere causal information is not good enough for an explanation.

My objection takes its start from a complaint Elliot Sober had against accounts of causal explanation like Lewis's.¹¹ As he points out,

When a building casts a shadow, the sun's position and the shadow's length do not explain the building's height because, it would seem, they do not cause it...The pseudo-explanation mentioned before of the building's height does tell us something about the cause — namely that it produced a building that allowed the sun to cast the length shadow it did.¹²

Lewis admits that causal information may be merely existential in character. We might explain an event by stating that it was caused by an event of such-and-such kind. This is precisely what we have in the flagpole example. The cause of the building was the kind of cause which enabled the building produce the shadow that it did. Unfortunately, pseudo-explanations like the flagpole example are precisely the ones that Lewis's account is supposed to rule out.

We can easily extend Sober's complaint to the barometer case. The reading on the barometer gives us causal information about the cause of a weather event. It tells us that the cause of the weather event also affects the barometer. That is, we are told that the weather event has a particular kind of cause — the kind of cause which affects barometers.

11. Sober's article predates Lewis's. However, his comments anticipate Lewis and provide a framework for criticizing his account of causal explanation.

12. Elliott Sober, "Equilibrium Explanation," *Philosophical Studies* 43 (1983): 201–203.

Each of our D-N counterexamples turn out to be explanations on Lewis's account. Thus, they are counterexamples to Lewis's account if they are counterexamples to the D-N model. The problem generalizes. Citing a common cause explains an event since it delivers information about the event's causal history. It tells us that the event's cause is of a certain kind, the kind that has some other mentioned effect. Worse yet, it turns out that Lewis must accept a kind of self-explanation. The fact that the salt dissolves tells us that the salt dissolving has a particular kind of cause — the kind that causes salt to dissolve.

The problem is that information is cheap; useful information is premium. Lewis does take pains to note that not all causal explanations are as good as any other. Perhaps Lewis's account is on better footing than the D-N account because he can say that while the length of the shadow is an explanation of the building's height, it isn't a very good explanation. This response isn't available on the D-N model. There are only explanations and non-explanations, not good explanations and bad explanations. Nevertheless, Lewis's view commits him to thinking that nearly all information is explanatory in some manner or other, even information about *explanandum* itself. Lewis's only recourse is to claim that such explanations are bad explanations. As Lewis notes, the quality of an explanation depends on a variety of pragmatic factors. For example, an explanation may not provide useful information by providing too little, too much, or irrelevant information.¹³ Lewis might comfortably admit that the counterexamples to D-N are explanations, just very bad explanations. The same would then be said of self-explanation.

However, to take this route is to reduce Lewis's account to a pragmatic account. The merits of pragmatic accounts aside, to call Lewis's account a *causal* account of explanation is a misnomer. The notion of 'causal information' is not doing any of the heavy lifting.

13. Lewis, *Philosophical Papers: Volume II*, see n. 4: 226-228.

Hard-nosed bullet biting won't do; such an account is not a satisfactory account of causal explanation. Lewis's account does not suffice for Beebe's purposes; she requires an account of causal explanation such that absences can explain without being causes. But the account she utilizes to satisfy this requirement is inadequate. Mere information about an event's causal history won't do — causal explanation requires more. It is difficult to see how more could be provided without requiring that the causal information *specify* causes of the event. In this case, absences couldn't causally explain without specifying causes. Perhaps a satisfactory account of causal explanation that fits the bill could be found, even if it is not Lewis's. However, in the next subsection, I argue that even if absences can causally explain without being causes *and* people do systematically confuse causation with causal explanation, Beebe is still unable to accommodate many of our intuitive judgments, those where we judge an absence to be an effect.

3.2.3 Preventions: Nothing to Explain

Assume for the moment that commonsense fails to distinguish between causation and causal explanation. Assume further that citing absences can causally explain events without absences being causes. Even this level of success cannot adequately explain away our commonsense judgments about the causal role of absences. Consider a modified version of our earlier example where Jones does close the fire door. His action would prevent the fire — and we would say that there was no fire *because* Jones closed the fire door. Commonsense would likely judge that Jones closing the fire door caused there to be no fire. Or, more naturally, Jones's action prevented the fire.¹⁴ But consider our explanatory claim

14. If your intuitions differ, consider the case where Jones's action contains the fire, thereby causing everyone in the building to evacuate safely. We do judge that Jones's action caused the safe evacuation, and it only does so in virtue of *preventing* the fire.

more carefully. Jones's action explains the *absence of fire*, and if Beebee is right, that is no event at all.

We should agree that Jones action explains the absence of the fire. But, just as relations need *relata*, explanations need *explananda*. But what is our *explanandum* in the modified Jones example? To find the explanandum would be to find an *event* that the his closing the fire door explains. The obvious answer cannot be right — the absence of fire. By assumption, this is not an event, and so it can not serve as our *explanandum*. *For Lewis-style causal explanations, we need an event about which to provide information.* Thus, an appeal to causal explanation does not explain our intuitive judgments about cases of *prevention*.

This failure is deeply problematic. The appeal to causal explanation is designed to mitigate the counterintuitive results of denying the causal role of absences. Though our commonsense judgments about the causal power of absences are false, they are not far off the mark. For our false but plausible commonsense judgments about causation and absences, there are true causal explanations near by. But there is no such causal explanation near to our judgments about cases of prevention; there is no event to explain.

In a recent paper, Achille Varzi has built on Beebee's proposal and addressed the issue of preventions. He claims just what I deny, that we can account for commonsense judgments about prevention cases by appeal to causal explanation. Consider Varzi's example: "Johnny didn't turn off the gas because he got absorbed in his book." Varzi admits that an explanatory claim like this does not provide a causal explanation of what happened — Johnny not turning of the gas is not a happening. Varzi claims that the information is

about the causal consequences of what Johnny does, that those consequences do not include Johnny turning off the gas.¹⁵

Varzi recognizes that for causal explanations we require events for explananda. When no events are readily available to fill that role we can find them — we allow that negative descriptions pick out events, if only generally.

I think that if this strategy works for missing events with regard to explanations, then it works for missing events with regard to causal statements. This insight motivates my positive proposal that I preview in the next section (and fully developed in Chapter 5). I distinguish between *causal statements* and the actual causes (events) that those statements pick out. Thus, we have relational negative causation in cases where negative causal statements have as their truthmakers the relevant entities which enter into causal relations. We can maintain the relationalist model of causation without holding that all negative causal claims are false. How?

The rough idea is that the negative description, “Johnny didn’t turn off the gas,” specifies the *explanandum*. In this case, the *explananda* are the events that result from Johnny’s reading a book. The upshot is that to provide an *explanandum* for Lewis-style causal explanations, Varzi allows negative descriptions to specify events or sets of events.

What Varzi says about cases of prevention by omission — negative cause and negative effect — makes the point more clearly. For cases of prevention, the *explanandum* is a set of events, generally specified. Consider another of Varzi’s examples: “Johnny didn’t turn off the gas because he forgot.” With regard to this, Varzi writes,

My answer is that we are in fact referring to a certain course of events, though very generally: we are referring to what happened at Johnny’s house during the period of time specified [in] the context of our narrative, and we are saying

15. Varzi, see n. 4.

that this course of events doesn't include any episode of a certain type A — any event of Johnny's turning off the gas — because it doesn't include any episode of a certain type B — any event of Johnny's remembering to do so.¹⁶

If Varzi is right, then the *explanandum* in our prevention example is the set of events which doesn't include Johnny turning off the gas. In the prevention by omission example, the *explanans* is information about what is not in the causal history of the set of events which doesn't include Johnny turning of the gas.

Varzi recognizes that for causal explanations we require events for *explananda*. When no events are readily available to fill that role we can find them — we allow negative descriptions to specify events. I argue that if this strategy works for missing events with regard to explanations, then it works for missing events with regard to causal statements. This insight motivates the positive proposal I develop in the remainder of this dissertation. I distinguish between *causal statements* and the actual causes (events) that those statements specify. On my view, we have relational negative causation in cases where negative causal statements have as their truthmakers the relevant entities which enter into causal relations. We can maintain the relationalist model of causation without holding that all negative causal claims are false.

3.3 Relational Negative Causation

I reserve a full development of my account of relational negative causation for later chapters. Here I mean only to sketch the basic strategy for how we should think about absences within a relational causal framework in light of my criticism of the Beebe-Varzi approach. We should begin by carefully distinguishing between causal statements and the

16. Varzi, see n. 4: 8.

actual causal *relata*. It is natural to think that a causal statement is true only if it directly specifies the causal *relata*. And this is what putative causal statements involving absences fail to do. Consider our paradigm omission case: “The failure to water the plant caused it to die.” The trouble is that such a statement fails to directly specify the causal *relata*; there is no event consisting of ‘the failure to water the plant.’ The designated waterer may be off playing a game, or there may be no waterer at all. As such there is no event to bear a causal relation to the death of the plant, a metaphysically respectable, if unfortunate, event.

Once we accept the relationalist framework and admit that there is no event ‘not being watered,’ must we accept that the putative causal statement is false? We need not. While there is no entity — event, state of affairs, etc. — of ‘not being watering’ — there is an entity which serves as the truthmaker for the statement that the plant is not watered. And this entity is the cause of the plant’s death. If we speak of events, there is an actual event, the causal *relata*, which essentially consists of “not being watered” that caused the plant to die. That event, its effect, and the causal relation are the truthmakers for the causal statement, “The absence of water caused to plant to die.”

We revise our earlier suggestion. A true causal statement need not directly specify the causal *relata*; a true causal statement must have as its truthmaker the actual causal *relata* and the causal relation. In this way, negative descriptions specify causes, if only generally. Return to our plant example, an absence of water caused the plant to die. Consider only the simple proposition, that there is an absence of water. This proposition has as its truthmaker some actual event — either the particular dry state of the soil in the plant’s environment or the particular osmotic pressure of the plant’s cells — that bears a causal relation to the state of the plant at the time of its death. The plant and its soil being the way that it was

caused the plant to die. In the current example, the negative description, the absence of water, picks out the actual state of the plant and its environment.

The crucial move is to distinguish between causal statements and the actual causes and effects. The idea is that we can pick out a cause in a variety of ways and to varying degrees of specificity, in this case, by citing an absence. The strategy I advocate requires only that an actual event serves as the truthmaker for a negative proposition.

To illustrate the above strategy, consider an example given by Judith Jarvis Thomson in a recent article. Consider the presence of Jane at a party. What is Jane's presence? It certainly isn't *Jane*. Rather, her presence is the state of affairs which consists in Jane's being at the party. We can also consider the absence of John at the party. What is John's absence? Why, it is the state of affairs that consists in John's not being at the party.¹⁷ The moral of the story is that there is only one party. And this particular arrangement of states of affairs — the party — can have effects. John's absence could upset Jane. Fortunately, we need not postulate some non-entity, non-John, to make sense of this causal claim. Thomson talks of 'states of affairs,' but we could just as easily talk in terms of 'events.' The idea is just that John's absence is not some sort of spooky negative event, rather John's absence consists in the very events of the party.

Varzi accepts an account like mine for a variety of cases. He writes,

Events are spatio-temporal particulars, so we can describe an event in many ways, just as we can describe an object in many ways, and depending on the context we may sometime be inclined to rely on negative rather than positive descriptions; yet a negative description need not correspond to a negative entity.¹⁸

17. Judith Jarvis Thomson, "Causation: Omissions," *Philosophy and Phenomenological Research* 66 (2003): 81–103.

18. Varzi, see n. 4: 1–2.

This is amenable to my proposal. We can pick out events in a variety of ways, and there are many reasons why we might choose a negative description. As Varzi rightly notes, causal statements are semantically transparent: “[A]ll that matters is the truth of our statement.”¹⁹

Varzi’s view of negative causation is more ecumenical than Beebee’s, but I argue that it does not go far enough. For cases like those mentioned in his earlier examples, Varzi does not think that this approach applies. He argues that there is no positive event picked out by ‘Johnny’s failure to turn off the gas’ which caused the explosion. Perhaps, as in the earlier example, Johnny was reading a book. Johnny reading a book did not, Varzi insists, cause the explosion. Varzi claims that it is for cases like this that we should appeal to Beebee’s proposal. Johnny’s failure to turn off the gas doesn’t cause the explosion, but it explains it.

I think that Johnny reading a book is a cause the explosion. Admittedly, this does *sound* counterintuitive, but only if we fail to attend to the distinction between causal statements and the causal *relata*, the entities which cause and get caused. To make the point, we can follow Varzi’s own analysis when he identified the *explanandum* in the prevention by omission case. There, the events being explained by the claim, ‘Johnny didn’t turn off the gas because he forgot’ is a set of events, selected by the context in which the claim is being made. If this is good enough to specify events for explanations, I see no reason why it is not good enough to specify events for causal relations. Whatever was going on in Johnny’s house while he was reading his book caused the explosion, and we pick-out those events with the negative description, ‘Johnny’s failure to turn of the gas.’ Those events, the causes of the explosion, are the truthmakers for that negative description.

My view is that we can specify causal *relata* with negative descriptions, and that this is sufficient for the truth of negative causal statements. However, my proposal seems to face

19. Varzi, see n. 4: 2.

the same problem that faced the non-relationalist. Once we admit that Johnny's failure to turn off the gas it seems that we must also accept that Sue's failure to turn off the gas is also a cause, even if Sue is no where around Johnny's house. However, on the view I have sketched, this problem is more apparent than real. 'Sue's failure to turn off the gas' is a possible negative description we can give to the events that occurred in Johnny's house that caused the explosion. But the events that a negative description specifies is determined by contextual features.²⁰ Only in a strange context does the negative description "Sue's failure to turn off the gas" pick-out the events which caused the explosion when Sue is no where around. Fortunately, this isn't a description that anyone is likely to give; Sue can rest easy. On my approach to relational negative causation, we multiply *descriptions*, not causes, and it is no surprise that descriptions are so readily multiplied.

20. This requires a significant contextual assumption. In Chapter 6, I note two categories of negative causation: those that require the assumption and those that do not. Generally, cases involving an agent's failure to act that require the assumption. Thus 'The gas not being off caused the explosion' does not require any contextualist assumption, but 'Johnny's failure to turn off the gas caused the explosion' does. I detail the reasons for this distinction in Chapter 6.

Chapter 4

Absences as Causes ¹

In previous chapters, I have been content to rebut the extent options for handling negative causation. The non-relationalist strategy throws the baby out with the bathwater. In an effort to retain our commonsense judgments that absences are often causes and effects, the non-relationalist must reject many of our other commonsense judgments: If my failure to water my houseplant causes its death, then so does President Obama's failure. The relationalist strategy, which straightaway rejects negative causation, is also wanting. The relationalist derides commonsense; we systematically judge that negative causal statements are true when they cannot be. But we have no satisfactory explanation for that error; an appeal to causal explanation won't suffice. It seems that we do distinguish causation from causal explanation; worse yet, it doesn't seem that absences can explain or be explained unless negative causal claims can be true.

Admittedly, none of what I have advanced is sufficient to demonstrate that either non-relationalism or relationalism, in its current form, are false. But the wedge is in. If I can

1. I would like to thank Phil Dowe, Robert Northcott, André Ariew, Evan Fales, and Alicia Finch for helpful comments on earlier drafts. Earlier versions of this chapter were also presented at the 2008 Central Division Meeting of the American Philosophical Association and the 2007 Meeting of the Central States Philosophical Association; I am grateful for many helpful comments from the participants at each conference.

demonstrate that relationalism is consistent with genuinism, then we have reason to prefer the account I offer over the alternatives. We can vindicate commonsense and preserve negative causation for other theoretical purposes in a way that satisfactorily tempers its scope. What we need is negative causation, but not too much of it. The account that I sketch in the current chapter, and develop more fully in the subsequent chapter, provides just that.

In order to frame the development of my account, I take on the central arguments against the possibility of negative causation in this chapter. Only with a clear bead on the arguments against negative causation can an adequate account of negative causation take shape. These arguments are, in many ways, old hat; they have been alluded to at various points throughout the dissertation. The first — the ‘Intuition of Difference’ argument — addresses the intuitive status of negative causation. Even if some absences seem intuitively causal, others do not; additionally, absences are intuitively ‘less causal’ than positive causes. The second — the ‘Theoretical Difficulties’ argument — trades on the problem of missing *relata*. Accounts of causation — non-relationalism excepted — require both cause and effect, and at least one of these is missing in cases of negative causation. Since I have set non-relationalism aside, I have confined my account to the requirements of relationalism. We must find the missing *relata* if negative causation is genuine causation. The ‘Theoretical Difficulties’ argument clarifies this requirement.

These arguments represent the most sweeping criticisms of genuinism, and versions of each are widespread. I reconstruct versions that Phil Dowe has recently presented. These arguments are not unique to Dowe’s work, but Dowe’s presentation of them has the virtue of being clear and focused. In what follows, I present and respond to both the ‘Intuition of Difference’ and the ‘Theoretical Difficulties’ arguments in turn. In the final section

of the paper, I offer a sketch of my account of negative causation (which is more fully developed in Chapter Five). In this chapter, I orient this sketch in terms of Dowe's preferred account of causation, the Salmon-Dowe Process Theory. In Chapter Five, I fully develop my account in terms of David Armstrong's theory of singular causation. The moral is that my account can remain largely agnostic as to which theory of causation is correct; negative causal statements can be true and express genuine causation no matter which metaphysics of causation prevail.

4.1 Are Absences Genuine Causes?

4.1.1 The 'Intuition of Difference' Argument

Ask the man on the street whether nothing can cause something. In all likelihood, he will say, "No." But ask the same man whether a negligent parent can cause his or her child harm. Odds are that his intuitions will shift and he will reply, "Yes." In his refutation of genuinism, Phil Dowe takes pains to stress that this conflict of intuitions continues as we consider various cases. What follows is a sample of a list he provides to highlight the tension:

1. I caused the terrorist attack in London by failing to report information that I had about it.
2. I caused the death of some penguins by failing to hire a plane and travel to the Antarctic to intervene in a shark attack.²

2. Phil Dowe, "Causes are Physically Connected to Their Effects: Why Preventers and Omissions are not Causes," in *Contemporary Debates in Philosophy of Science*, ed. Christopher Hitchcock (Malden, MA: Blackwell Publishing, 2004): 191.

It is quite natural to regard the first statement, but not the second, as providing genuinely causal information. And this is the fundamental intuitive puzzle about absences as causes: even if some absences seem genuinely causal, others certainly do not. The problem is that both of these examples involve the absence of action: in either case, had I acted, the effect would have been prevented. The only difference seems to be one of distance, and there is no principled way of determining how much distance is too much. Accordingly, most of the authors amenable to the possibility of absences as causes — non-relationalists — grant that each is a case of causation.³ For such authors, the intuition of difference is explained away by pragmatic considerations. Distance makes a difference to which causes we are inclined to cite, but each is a cause nonetheless. As we have seen, this explanation is unsatisfactory.

For present purposes, we can bracket off the evaluation of the pragmatic approach. For Dowe's part, the upshot for our present discussion is that, if genuinism is true, then failing to intervene a shark attack causes penguin death if failing to report information causes a terrorist attack. And this is certainly counterintuitive. If preserving our intuitions about particular cases is a primary motivation for genuinism, then that motivation is severely undermined.

By this point, the 'intuition of difference' argument is an old saw. It is the difficulty that galvanizes relationalism and it is the central difficulty the non-relationalist must face. But we can push the issue further. There are two intuitions of difference that the relationalist can exploit. On the one hand, there is the intuition of difference between plausible negative causal claims, like 'my failure to water my plant caused it to die' and implausible negative causal claims, like 'Obama's failure to water my plant caused it to die.' On the other hand, there is the intuition of difference between negative causal claims, like our plausible one,

3. Bennett, see n. 21; Lewis, "Causation as Influence," see n. 1, See:

and positive causal claims, like ‘my poisoning my plant caused it to die. In the latter case, I *kill* my houseplant. In the former, I merely *let it die*. It is quite common to think that killing is worse than letting die. We might translate this into causal terms and suggest that killing is *more* causal than letting die. Hence there is a second intuition of difference, this time between negative and positive causation.

We can reconstruct the argument quite simply:

- P1.** Intuitively, there is some difference between the causal status of ‘positive’ events and ‘negative’ events.
- P2.** If both negative events and positive events are genuinely causal (i.e., if genuinism is true), then there is no difference.

Therefore, genuinism is false.

The point is that there is a strong intuition that even if failing to water my plant is a cause of its death, it isn’t *as* causal as poisoning my plant. But does the difference depend on some fundamental difference between negative and positive causation? I argue that it does not.

To set the stage for my rebuttal, consider a case of two children playing catch. **BASEBALL:** One child throws a ball and the other child fails to catch it. As a result, it hits a window and the window breaks. No doubt, the child who threw the baseball caused the windows to break. Even if we accept that the other child’s failure, the absence of the catch, is a cause, it certainly doesn’t seem to be a cause in the same way as the throw. Examples like this are standard issue in the genuinist’s critic’s arsenal. Just as we saw in Dowe’s earlier example, they are meant to show that negative causation and positive causation are intuitively different.

Fortunately for the genuinist, this strategy is a double-edged sword. I argue that the baseball example does not highlight an intuitive difference between negative and positive causation. Rather, the baseball case merely demonstrates that some causes are merely more salient than others. The same could be said for the terrorist attack case. Not only is this unsurprising, it is hardly a mark against genuinism. Consider a case where the positive cause is less salient than the negative cause. FIRE: A wildfire rages through the Pacific Northwest. The causal history of FIRE is as follows. After long periods of drought, a lightning strike catches a tree on fire and spreads, becoming an uncontrollable wildfire. The negative cause is the drought, or the absence of rain. The positive cause is the lightning strike or the burning tree, which ever you like. The upshot is that a reporter and her audience would likely find the lightning strike hardly worth mentioning. What matters is the drought. Here we have a case where the negative cause is intuitively more causally relevant than the positive cause. (The popular way of expressing this would be to say that the drought *really* caused the fire.)

In both BASEBALL and FIRE, we have positive and negative causes. In BASEBALL, the positive cause is more salient. But this should not lead us to think that negative causes are not genuine causes, since there are equally compelling cases — like FIRE — where the negative cause is more salient. When asked about the cause of some event, there certainly are cases where we would mention some positive cause and ignore the negative causes. But in other cases, we are inclined to mention the negative cause alone. Foresters are far more concerned with dry fields than lightning strikes, but home owners are more concerned with baseball throwers than they are with bad catchers.

Thus far, I have taken care to point out that Dowe's 'intuition of difference' does not cut along negative and positive lines. Instead, the source of the intuition is causal salience.

If we cherry-pick cases, then we can list ones when the positive cause is intuitively more causal than the negative causes — but only if we cherry pick. A broad and inclusive assessment of cases shows that, very often, negative causes are intuitively more casual than positive ones. This point becomes all the more clear when we consider cases where the causally efficacious absence is either hidden in the causal chain or mis-described as a positive event. Thus far, I have considered cases where the putative cause is clearly some absence. There are many more cases that appear to be cases of positive causation, yet, upon closer inspection, turn out to involve absences. The analyses of such cases do two things: One, we see that, with such cases of ‘hidden negative causation,’ there is no intuition of difference. Two, we get a clearer picture of the ubiquity of negative causation.

Consider a case that sounds like a case of positive causation. MURDER: A murderer shoots and kills another person. On the surface, MURDER looks like a clear case of positive causation. We have a cause, either the gunshot or the gunshot wound, and an effect, the death of the other person. However, gun shot wounds typically cause a massive loss of blood, and it is the absence of blood that does the victim in. If the intuition of difference tracked the negative/positive cause distinction, then our causal intuitions about MURDER should shift upon learning the actual etiology. But they don’t. The gunshot wound, a negative cause of death, is still the genuine cause. Furthermore, the absence of blood is more salient than any of the other positive facts that might be causally relevant. Our judgments about MURDER remain solid: Gunshot wounds are, unfortunately, genuine causes of death.

Examples like MURDER not only further the point that there is no intuition of difference concerning negative and positive causation, they also highlight just what is at stake. If negative causation is not genuine causation, then a vast array of intuitive causal judgments

turns out to be false. For instance, if we reject negative causation, then smoking doesn't cause cancer. The standard view is that carcinogens typically shut off the natural growth inhibitors in cells resulting in abnormal growth.⁴ It is the absence of those inhibitors that matter. But if absences aren't causes, then Big Tobacco wins. Clearly, the costs of abandoning negative causation are great.

Dowe's conclusion is that we can only get so much mileage out of a survey of our intuitions. He writes:

If this analysis is correct, it spells the failure of any argument that appeals simply to "folk intuitions" about some particular case to establish (1) that indeed it is a case of causation, and (2) that a theory of causation that gives the opposite result is therefore wrong.⁵

This goes for relationalists and non-relationalists alike who merely offer quips about the commonsense status of any particular putative case of negative causation. On this point, I agree. We require more than intuitions to make our case. As Dowe points out, many well-entrenched intuitions have been overturned. It was once thought to be the case — and it still *looks* like it is the case — that the sun rises. However, our best empirical theories entail that the sun does not rise, despite appearances. Examples like this are often trotted out to demonstrate the fallibility of commonsense. However, what we have in the case of

4. This paradigm has been recently challenged; see A.M. Soto and C. Sonnenschein, "The Somatic Mutation Theory of Cancer: Growing Problems with the Paradigm?" *Bioessays* 26, no. 10 (2004): 1097–1107. However, the basic point remains. No matter the underlying biochemical process, our judgments that smoking causes cancer remain robust. Whether or not smoking causes cancer does not depend, in the least, on whether the biochemical pathway involves abnormal growth because of an absence of growth regulators or the presence of some growth producing chemical.

5. Dowe, "Causes are Physically Connected to Their Effects: Why Preventers and Omissions are not Causes," see n. 2: 191.

the rising sun, but we don't have for negative causation, is a good explanation for why it appears to us that the sun rises when it doesn't.

Without such an explanation, the evidential weight of intuitions remains at the fore. I maintain that an adequate theory of causation will either preserve our commonsense judgments or adequately explain our mistakes. We have seen that an appeal to causal explanation will not suffice. Dowe offers an alternate explanation, given in terms of *quasi-causation*, or possible causation. Before addressing Dowe's own explanation, I turn now to the 'Theoretical Difficulties' argument.

4.1.2 The 'Theoretical Difficulties' Argument

The 'Intuition of Difference' argument is supposed to make us question the evidential value of our intuitions about negative causation. If our intuitions under-determine our commitment to negative causation, then the 'Theoretical Difficulties' argument is poised to turn the tide against it. The upshot is that our extant theories of causation cannot account for negative causation.⁶ Of course, if the intuitive case for negative causation were clear, such a failure would be reason enough to replace those theories with ones that could account for negative causation. But the intuitive case is not clear — so much the worse for negative causation. This is the one-two punch of the genuinist's opponents.

The 'Theoretical Difficulties' argument exploits the problem of the missing *relata*. This problem undergirds many of the objections to negative causation that have been raised throughout the dissertation. Here we reconstruct and deal with the problem with greater care. Dowe considers three predominant accounts of causation and argues that none can

6. Dowe, "A Counterfactual Theory of Prevention and 'Causation' by Omission," see n. 1.

accommodate negative causation. The crucial point is that each considers causation a relation, and relations need that which negative causal claims appear unable to provide — both *relata*, cause and effect. The view under consideration are: (1) Lewis’s view that causation is a relationship that holds between events; (2) Armstrong’s view that causation is a relationship between facts; and, (3) The Salmon-Dowe account that analyzes causation in terms of connecting physical processes. I reconstruct the basic argument:

P1 If genuinism is true, then things that didn’t happen are causes of things that did happen.

P2 Causation is either analyzable in terms of relations between events (Lewis) or states of affairs (Armstrong) or in terms of sets of connecting processes and interactions (Salmon).

P3 Things that don’t happen can’t bear relations to things.

P4 States of affairs that don’t obtain can’t bear relations to other states of affairs.

P5 Things that don’t happen can’t be connected by processes or interact with things.

C Therefore, genuinism is false

The Lewis and Armstrong approaches analyze causation in terms of relations between cause-effect pairs, where those *relata* are either taken to be singular events or states of affairs. Lewis takes it as a principle that relations must relate something to something.⁷⁸

7. This is the primary reason that Lewis later rejects the view that causation is a relation. See (Lewis, “Causation as Influence,” see n. 1; Lewis, “Void and Object,” see n. 2)

8. Dowe, “A Counterfactual Theory of Prevention and ‘Causation’ by Omission,” see n. 1: 219.

So if negative events are those that don't occur and negative facts are those that don't obtain, then negative causation is impossible.

There is a related difficulty for process accounts of causation, like the Salmon-Dowe 'conserved quantity' theory of causation. Dowe provides a rough outline of this account:

A causal interaction is an intersection of world-lines that involves the exchange of a conserved quantity... A causal process is the world-line of an object that transmits a non-zero amount of a conserved quantity at each moment of its history (each space time point of its trajectory).⁹

Dowe goes on to clarify transmission of a conserved quantity:

A process transmits a conserved quantity between A and B ($A \neq B$) if and only if it possesses [a fixed amount of] this quantity at A and at B and at every stage of the process between A and B without any interactions in the open interval (A,B) that involves an exchange of that particular conserved quantity.¹⁰

The idea is this: Causal processes are those that can transmit a signal via some physically possible pathway. The signal just is the conserved quantity that moves from A to B in virtue of the connection between A and B, rather than by some intervention from the outside (i.e., it's not the case that if C causes A and B that the movement from A to B or from B to A represents a causal process). The upshot is that A and B can be anything that involves the possession of a conserved quantity, "facts, events, or whatever"¹¹ Well, so long as that anything is something. Dowe puts the problem this way:

But clearly neither omissions, however they are understood, nor preventing events are linked to their 'effects' by this sort of connection. There is no set of processes and interactions connecting either the father's failure to grab the child with the accident, nor the father's grabbing the child with the absence of the accident.¹²

9. Dowe, "Causation and Misconnections," see n. 3: 926.

10. Ibid.: 927.

11. Ibid.: 927.

12. Dowe, "A Counterfactual Theory of Prevention and 'Causation' by Omission," see n. 1: 220.

If causes are things linked to their effects by processes and interactions, then absences can't be causes. Nothing can't be linked to something. And so much the worse for genuinism: Dowe argues that it suffers both intuitive and theoretical problems. The genuinist challenge — the one that I take on — is to vindicate negative causation in a way that *does not* link 'nothing' to 'something.'

4.1.3 Absences as Quasi-Causes

We see that Dowe's reasons for rejecting negative causation are akin to Beebee's reasons. Negative causation violates the basic relational character of causation. But what of the intuitive puzzle? My failure to water my house plant *seems* to cause the plant's death. To explain away our intuitions about the seemingly causal role of some absences, Beebee argued that we confuse causation with causal explanation. However, in Chapter 3, I argued that this approach fails. Dowe offers an alternative explanation; Dowe offers a theory of 'Quasi-Causation.' The idea is that while only positive events count as genuinely causal, talk about absences is talk about possible causation. Call absences quasi-causes. Quasi-causes are defined in terms of actual causation (which explains their causal appearance). Roughly, some negative event not-O quasi-causes some event E if E occurred and if O had occurred, then E wouldn't have.¹³ The prize is the preservation of positive causation qua causation and the explanation of our intuitions about some absences being causes.

There are two ways in which absences are thought to be causally relevant. There are omissions and preventers. Thus, on Dowe's account, these are the two kinds of quasi-causes. Omissions are absences that quasi-cause positive events, whereas preventers are

13. Dowe, "Causes are Physically Connected to Their Effects: Why Preventers and Omissions are not Causes," see n. 2: 193.

positive events that quasi-cause absences. Or there can be prevention by an absence: not-A quasi-causes not-B. To simplify matters, I will deal with omissions alone. Consider Dowe's formal analysis of omission:

Omission: not-A quasi-caused B if B occurred and A did not, and there occurred an x such that: (O1) x caused B, and (O2) if A had occurred then A would have prevented B by interacting with x where A and B name positive events/facts and x is a variable ranging over facts or events, and where prevention is analyzed as above [see my general characterization of quasi-causation above].¹⁴

This analysis gets our intuitions right if we plug in 'I failed to water my houseplant' for A and 'the houseplant dies' for B. The point is this: Dowe sets out to offer a principled account of absences as quasi-causes such that genuine causation is reserved for positive events in a causal sequence. Our folk intuitions about absences as causes get cashed out in terms of quasi-causation. And we have an explanation for our inconsistent intuitive judgments about the causal efficacy of failures to water plants.

4.2 Yes, Absences are Genuine Causes

Dowe's solution is attractive; however, it only moves the puzzle, it doesn't solve or dissolve it. On my read, both Dowe and the genuinist have a bullet to bite, and it is the very same bullet. Both views afford failures to water your houseplants and failures to stop shark attacks half-way across the world the same metaphysical status. Unfortunately, failing to intervene a shark attack quasi-causes penguins to die just in case failing water your houseplant quasi-causes the plant to die. Dowe is supposedly on better footing — since he insulates "real" causation from these concerns — but the value of this insulation doesn't run very deep. As Dowe admits, the Big Bang might be the cause of everything.

14. Dowe, "Causes are Physically Connected to Their Effects: Why Preventers and Omissions are not Causes," see n. 2: 193.

Typically, we think of longer chains as not causation even though they are, because they are less within our control. Thus in law there is usually a ‘break’ before the chain is traced back too far, even though the definition of causation utilized in law *sine non qua* is transitive. The same treatment can be given for cases like “the big bang caused today’s rain.”¹⁵

Dowe argues that this implication is unproblematic, since he doesn’t take intuitions to be the primary source of data about causation.¹⁶ His is an empirical analysis of causation, drawing its primary support from our best scientific theories. The ‘intuition of difference’ argument is only an argument against those who are inclined to accept genuinism in light of our intuitive judgments about the causal status of absences. For Dowe’s part, the ‘theoretical difficulties’ argument has the last word.

In light of this, it is fair to pose the following question: Does an empirical analysis of causation, given the ‘conserved quantity’ account of causation (Dowe’s preferred theory of causation), support the denial of genuinism? I argue that it does not. Dowe’s empirical analysis of causation gives us no *a priori* reason to reject absences as causes and that an empirical investigation will very often support the claim that absences are causes. I reject P5 of Dowe’s ‘Theoretical Difficulties’ argument. (In the following chapter, I wage a similar argument with regard to states of affairs. I further maintain that the same could be said for events.) In what follows, I will argue that ‘absences’ can be connected by processes or interact with things.

First, I should introduce a caveat. In the introduction, I claimed that the notion of an ‘absence’ has been misunderstood. There is a sense in which the demand for entities

15. Dowe, “Causation and Misconnections,” see n. 3: 929.

16. Ibid.: 927.

as causal *relata* rules genuinism out *a priori*. After all, if we take genuinism to be the view that non-entities can be causal *relata*, the view is a non-starter. But I don't think we should take genuinism in that way. Rather, genuinism is the claim that everyday, ordinary 'absences' (e.g., a lack of water) are genuine causes. To assume that such absences are non-entities is to stack the deck against genuinism, but nothing about genuinism demands such an assumption. I take genuinism to be the view that sentences of the form, "The absence of x caused y" are very often true and express genuine causal relations.¹⁷

My position is that such 'absences' are absences by *description*. To clarify my view, we should consider an example. Take this state of affairs: That the plant wilted. As it goes, a plant wilts when the turgor pressure of its cells is decreased. The turgor pressure is just the pressure of the cell so that there is a force exerted from the inside keeping the cell inflated. (Water your house plant with salt water and it will wilt because change in osmotic pressure causes water to leave the plant cells.) Now, return to our state of affairs, "That the plant wilted." (For convenience, imagine the relative cellular pressures inside the cell and outside the cell are either 'high' or 'low' with respect to one another.) Now why did the plant wilt? Presumably, we would cite the fact, 'That the turgor pressure was low.' That is, we would cite an absence of sufficient turgor pressure.

Dowe addresses a point in this area. Due to epistemic limitations, we may be unable to tell whether a particular fact is positive or negative. Take the example, "Smoking causes heart disease." Since smoking likely prevents the natural function of the heart, smoking is most likely a quasi-cause of heart disease. Dowe goes on to note that quasi-causation is practically equivalent to genuine causation; for instance, quasi-causation might track

17. A genuinist of my bent would also claim that the same holds for sentences where the absence is an effect or both cause and effect.

moral responsibility.¹⁸ As a result, there is confusion, but the problem is merely epistemic. Metaphysically, Dowe insists, the cause/quasi-cause distinction is robust.

My point goes beyond mere practical equivalence. Notice how easily ‘positive’ facts become ‘negative’ facts. Consider the following triplet of sentences relating to an absence of turgor pressure:

1. There was an absence of sufficient turgor pressure.
2. The osmotic pressure inside the cell was lower than the pressure outside the cell.
3. The osmotic pressure outside the cell was higher than the pressure inside the cell.

No doubt, the truth of each of the above statements is grounded, in some particular circumstance, by the very state of the world which consists of the plant cell and its immediate environment. It is uncontroversial that high pressure states are capable of being causal, so too are low pressure states. Our decision to call this particular state a high or low pressure state is largely arbitrary, depending on contextual factors. So too with our decision to describe the state as an absence of turgor pressure. And the problem isn’t merely epistemic. Each ‘fact’ is merely a description of the way the world is. The absence of turgor pressure just is the osmotic pressure differential. The distinction so-called ‘positive facts’ and ‘negative facts’ isn’t a metaphysical distinction.

My critic might argue that I have misconstrued the plant example. Properly speaking, a wilted plant just is a plant with low cellular pressure. Certainly, facts about wilted plants are positive facts, since they clearly assert the way the world is, rather than the way the world

18. Dowe, “Causes are Physically Connected to Their Effects: Why Preventers and Omissions are not Causes,” see n. 2: 194.

isn't. What the genuinist really needs is to show that the wilting of the plant is caused by an absence of water.

Perhaps this criticism is more serious for the genuinism if we assume a singular event causal account. While I think that it is not, here I leave it an open question. Instead, consider whether a process causal theorist can make this criticism. Recall the process account: Causal processes are those that can transmit a signal via some physically possible pathway. Following Salmon, we can clarify signal transmission in terms of 'mark transmission.'

MT: Let P be a process that, in the absence of interactions with other processes, would remain uniform with respect to a characteristic Q, which it would manifest consistently over an interval that includes both of the space-time points A and B ($A \neq B$). Then, a mark (consisting of a modification of Q into Q'), which has been introduced into the process P by means of a single local interaction at point A, is transmitted to point B if P manifests the modification Q' at B and at all stages of the process between A and B without additional interventions.¹⁹

The notion of mark transmission is introduced to distinguish between processes and pseudo-processes, where only processes are capable of genuine causal influence. To hone in on a process, consider a standard example of a pseudo-process: If I shine a light on a wall and move it, the apparent movement of the spot is a pseudo-process. The process is the transmission of the light to the spot on the wall, not the light from the various spots on the wall to the others. This is because the moving spot on the wall cannot transmit a mark; a modification of one spot on the wall (imagine painting that spot red) does not persist to the next spot on the wall. However, if we introduce a red filter at the source of the light, the resulting red spot is transmitted by a genuine causal process; the red spot is transmitted throughout the process.

19. Wesley C. Salmon, "Statistical Explanation and Causality," in *Theories of Explanation*, ed. Joseph Pitt (n. p.: Oxford University Press, 1988): 89.

Salmon immediately notes a concern with MT: The principle is clearly counterfactual. To allay worries about the subjective nature of counterfactuals, Salmon claims that the counterfactuals are to be experimentally determined. In short, whether a putative process is capable of transmitting a mark will be experimentally determined.²⁰ And this works nicely with Dowe's empirical analysis of causation.

So why can't 'absences,' like an absence of water, transmit a mark? If processes are to be determined experimentally, there is no principled reason why they cannot. Consider a process P, the osmotic equilibrium of a healthy, well-watered plant cell. This process manifests itself as a stable ionic equilibrium with respect to a characteristic Q, the turgor pressure of that cell over some interval. Then a mark is introduced to P as a modification of Q into Q'. In this case, the mark is a lack of water, introduced by evaporation and normal plant metabolism. The resulting characteristic Q' is low turgor pressure. From the point of the mark's introduction, it is transmitted without further intervention by P. The plant wilts, and the wilting was caused by an absence of water.

The genuinist's critic could bite the bullet and claim that the evaporation of water is a genuine cause of the wilting of the plant, but that an absence of water is not. But this would be a trivial rejection of genuinism. After all, the evaporation of the water is preventing the health of the plant in this same way that smoking prevents the health of a smoker's heart, something Dowe is prepared to call quasi-causation. It is well-known that smoking results in heart disease, in large part, due to the decrease in oxygen delivered to the heart. We could give the same analysis for smoking and heart disease that we gave for evaporation and wilted plants. Smoking introduces a modification to the health of the smoker — a lowering of blood oxygen — that is transmitted through the process without further intervention.

20. Salmon, "Statistical Explanation and Causality," see n. 19: 90.

So far, this bodes well for the genuinist. We at least get the result that smoking genuinely causes heart disease, just as we can say that the removal of water by evaporation causes the plant to wilt (and eventually die). But, can we say that an absence of water causes a plant to wilt? I think we can. Think back to the red filter case from our clarification of mark transmission, where a red filter is affixed to the light source. We wouldn't have any trouble calling this a causal process, as the process (light beam) transmits a mark (red light). And we wouldn't have any trouble saying that the red filter is a cause of the red light spot, it is the intervention that makes the mark. Similarly, in the plant case, the process (osmotic equilibrium) transmits the mark (shift in equilibrium) by way of the intervention, the removal of water. So we call the removal of water a cause of the wilting — no problem. My point is that it is very odd to say that the removal of water is a cause of the wilting but that the absence of water isn't. The expression, 'the absence of water,' picks out a state of affairs at a certain point of the process, 'the removal of water by evaporation.' (It picks out the end of the process.) We should not say that a process is causal, yet a particular point in that very process is not.

The analysis I have provided at least shows that, given a process account of causation, we can genuinely consider some absences as causes. This has the nice result of vindicating many of our intuitive judgments. But, when we consider examples that involve agential inaction, matters are more complicated. For instance, we can't yet say that my failure to water the plant caused it to die. These cases are much more difficult; in what follows, I will sketch how we might handle them.

Consider an example of parental neglect. **SWIMMING:** A father takes his child swimming. The father acts negligently and fails to supervise his child and she drowns. Here we want to say more than an absence of supervision caused the child to drown, we want

to say that the father's absence of supervision is a cause. This is, of course, more difficult, since we need to be able to specify the process by which the father's negligence transmits a mark. For a start, Let P be the process 'parental care' and Q be the characteristic 'the child's safety.' Take Q to manifest itself consistently over an interval— perhaps the father had been diligent up until now. Then a mark is introduced, which consists in a modification of the child's safety Q into the child's peril Q'. It seems that this process P satisfies the principle, MT. The modification Q' manifests itself at all stages of the process since its introduction, and is transmitted to point B, which is sadly, the child's demise. By satisfying MT, the father's negligence — the absence of his care — counts as a cause of the child's death.

Salmon and Dowe would surely object. After all, the causal process must be a physically possible pathway, and SWIMMING seems to involve action at a distance. In the 'process' I specify above, there does not seem to be the sort of physical connection exhibited by the smoking and absence of water cases. I should point out that the possibility of action at a distance is an empirical question, as troubling a notion as it seems to be. Fortunately, we need not appeal to action at a distance to make sense of SWIMMING. There is plenty to connect the father to the child. They are, of course, part of the same causal system. To demonstrate this, return to the notion of a causal interaction, or an intersection of world-lines that involves the exchange of a conserved quantity. This intersecting of 'world-lines' is essential to our notion of a system, a complex unity of interacting and interdependent parts. Just as these intersections make up the web of causation wherein plant cells interact systematically with their environments, so too for the systematic interaction of parents with their children. In so far as the father is a proper part of the relevant system, his failure to act is just as causal as the water that entered the child's lungs.

I argue that we only fail to specify causal processes connecting negligent parents to the plight of their children when we individuate systems narrowly. So long as the negligent father is considered a proper part of the causal system that culminates in the drowning of the child, he is a cause of her death. Moreover, we cannot help but recognize the systematic relationship between plants and the soil that surrounds their roots. Similarly, we are disinclined to regard our failure to intervene a shark attack as a cause of a penguin's death because we don't typically individuate systems that broadly. And this parallels the problem concerning the Big Bang causing everything else. This is an event if there ever was one, but we hesitate to call it the cause of my writing this essay because it requires us to broadly construe the relevant causal network. The moral is that the fundamental puzzle about absences as causes is dissolved if we focus on how we individuate causal subsystems from within the causal nexus, in toto. In this essay, I cannot say much about how this individuation should proceed. Here, I am content to point out that there are causal processes connecting the negligent father and his child. If this seems a sort of causal misconnection, it isn't any more troubling than the connections between the big bang and everything else. And the Big Bang is something that Dowe and like-minded theorists are well-prepared to call a genuine cause.

When we consider absences like 'the absence of water,' we can avoid the unpalatable ontological explosion of causes that imperils non-relationalist. Admittedly, this is more difficult to avoid when we introduce agential inaction. If the father's negligence is a cause of the child's death in SWIMMING, what must we say about everyone else who didn't save the child? The answer lies in the specification of the causal process. The relevant process P is 'Parental Care.' This is the process which relates the father to his child, and excludes others who might have saved the child. In Chapter 3, I offered a contextualist

response to similar problems involving little Johnny's failure to turn off the gas. I further examine this issue in Chapter 6. For present purposes, it is sufficient to show that, for the process account, whether agential inaction counts as a cause is determined by the scope of the process in question. How these processes are individuated is another matter, and may require additional assumptions, like the contextualist assumption active in Chapter 3.

4.3 Conclusion

If we take seriously an empirical analysis of causation, we cannot *prima facie* rule out negative causation. And given the experimental basis of the process theory of causation, we have plenty of reasons to suggest that 'absences' are perfectly capable of transmitting a mark. But the 'absences' we speak of are merely absences by description. The man's negligence is not some sort of non-entity; his negligence consists in the very state of the man's existence and his activities. As such, his negligence is perfectly capable of transmitting a mark.

At the end of the day, there is only one causal nexus. However, inquiries concerning causation always make essential reference to a portion of that causal system, individuated narrowly or broadly. The Big Bang is the cause of this essay if my being in a philosophy department is, but not if we're only talking about recent events. So too with negligence: The man's negligence is the cause of the child's death, but not if we are only interested in the physiological system. And even there is a context wherein we are a cause of penguin death, our distal connection shouldn't keep us up at night.

On the account I advocate, causal disconnections and misconnections are context dependent and determined by the relevant request for causal information. When a biology professor asks her students, "What caused the plant to wilt?" it won't do any good to reply,

“Nobody watered it.” But if my spouse asks, I had better not cite low turgor pressure. The appropriateness of each regards an embedded reference to a particular causal subsystem, but both replies, properly speaking, involve essentially causal information.

Chapter 5

Ontologically Serious Genuinism

As we have seen, our intuitions about particular cases suggest that absences can be, and very often are, genuine causes. However, major theories of causation render negative causation – causation by or of absences – incoherent. Causation is typically taken to be a relation, and relations must relate something to something else. Negative causation *seems* to imply causation by or of *nothing*. In the previous chapter, I argued that this is a misunderstanding of absences. ‘Absences,’ at least those intuitively causal ones, are not metaphysical absences. Rather, negative causal statements specify causes or effects – uncontroversial positive entities – negatively. Thus the truth of negative causal statements does not commit us to the existence of negative entities – a troubling proposition.

To this point, I have not developed a full account of negative causation. Rather, I have demonstrated that there is no clear intuition of difference between negative and positive causation and that the extant accounts of causation only rule out the possibility of causal non-entities. The critic of genuinism may agree on the matter of the intuition of difference, and discount our commonsense judgments that absences are ever causes or effects. However, any intuition of difference that one might suggest is more plausibly explained in terms of salience. After all, events have many causes and our indication of ‘the cause’ is typically a matter of contextual factors. Often, our interests will regularly pick out negative causes as

well as positive ones. Furthermore, I have highlighted just how pervasive negative causation is in our commonsense causal claims. Many instances of seemingly positive causation turn out to be, on further inspection, instances of negative causation.

In the previous chapter, I sketched an account of negative causation given the process theory of causation. On this approach, negative causal claims describe features of a genuinely causal process. The slogan is that negative causation is only negative at the level of description. In this chapter, I further develop this account, and carefully specify how it functions from within a highly restrictive account of causation, D.M. Armstrong's account of singular causation. The motivation is this: Armstrong's account is highly restrictive, specifying within a narrow range what is genuine causation. I argue that even given these restrictions, Armstrong's account does permit a range of true negative causal claims.

The strategy that I employ in the context of Armstrong's view of causation is instructive for how we should regard negative causation, generally. The upshot of my account is that true negative causal claims have as their truthmakers actual (positive) entities (states of affairs for Armstrong's part). The lesson is that causally efficacious absences are not ontologically spurious non-entities; they perfectly ordinary entities capable of bearing relations to other things. This general lesson is applicable well-beyond the confines of Armstrong's account. Any relational account of causation can recognize the causal status of absences of the sort I describe. Such absences are not metaphysical absences and they require no ontological addition. Thus, my account of genuinism –the view that absences are genuine causes –is ontologically serious genuinism.

In this chapter, I show that negative causation is consistent with Armstrong's view of causation and, *a fortiori*, our pretheoretical causal realism. I sketch the basic features of Armstrong's account and reconstruct his arguments against negative causation. With

this in place, I proceed to show that a certain class of important negative causal claims is consistent with Armstrong's account. This class of causal claims satisfies his theoretical requirements and avoids his argument against the possibility of negative causation. On the strongest reading of Armstrong's view, my account provides a counterexample to his argument against negative causation. On a weaker reading, my account provides an amendment to Armstrong's account, allowing it to recognize negative causation as genuine causation. On either reading, I preserve both the possibility of negative causation and the relational nature of causation.

5.1 The Case for Singular Causation

As strong as the intuitions in favor of negative causation are, there are equally compelling intuitions about the nature of causation that push against genuinism. Consider a single causal occurrence where a causes b . For a Humean, of course, causation is just a general regularity and our single causal occurrence is just an instantiation of the regularity. However, as Armstrong points out, the Humean view fails to answer an intuitively important question: In virtue of what does this particular a bring about this particular b ?¹

Intuitively, there is an answer to this question. Imagine a world without any regularities at all. For the Humean, this would be a world without causation. However, this position is deeply unsatisfying. At least, it isn't clear that such a world would be void of causation. It might be the case that token events still bring about other token events, even if they do so without any regularity whatsoever. Intuitively, it is still possible in such a world for a to bring about b . If so, then we require an account of singular causation, rather than a mere regularity account of general causation. The central thesis of singular causation is that the

1. Armstrong, *A World of States of Affairs*, see n. 1: 202.

causal relation holds between cause and effect alone, independently of anything else (e.g., regularities).²

The issue of singular causation lies at the core of a deep debate between Humeans and causal realists, like Armstrong, but for present purposes we can bracket this issue. What concerns us now is, if the realist intuition about singular causation is correct, is negative causation possible? To get at this question, I will turn to a brief argument for singular causation. This argument serves to highlight the intuition that singular causation is a real phenomenon. After establishing the merits of this intuition, I will explicate a predominant view of singular causation (Armstrong's) and his arguments that purport to show that realism about singular causation precludes negative causation.

Armstrong reconstructs an argument, which he credits to earlier work by Michael Tooley and John Foster, that aims to demonstrate the existence of real singular causation. We begin by describing a simple case of direct causation in a two-dimensional world (for convenience). Imagine two particles, C_1 and C_2 at some distance d from one another. Each particle is governed by the same law such that there is some probability (< 1) that it will produce some effect e (some other particle) at some distance l from it. For the purposes of the example, keep $d < l$ so that the range of locations that each particle is capable producing its effect overlap at two points. In the example, e is produced at one of the points of intersection. Following Tooley and Foster, Armstrong claims that there is some objective fact of the matter as to which of the two particles produced e . To be sure, there is the possibility of overdetermination, where both produced e , but even that would count as an objective fact. (Of course, we might struggle to determine whether C_1 , C_2 , or both C_1 and C_2 is the cause of e , but this is merely an epistemic limitation. All that matters is that we

2. Armstrong, *A World of States of Affairs*, see n. 1: 202.

think that one of those options is the real cause.) This particular example tells against the Humean approach, since a mere regularity theory could not, even in principle, distinguish between our options and pick out the actual cause.³

The above possible case highlights the intuition that causation involves a direct relationship between cause and effect. If we accept the assumption that there is a fact of the matter as to which particle brought about e , then the example provides a reason to endorse singular causation. As an argument, this is circular, and Armstrong is well-aware of this problem. Merely accepting the assumption, which is supposed to argue for singular causation, is tantamount to accepting singular causation.⁴ The value of this case is not its argumentative force; rather it is the clarity with which it highlights our intuitive commitment to singular causation. If there is an objective fact as to which cause C_1 or C_2 produced e , then singular causation exists. It is, of course, open to the Humean to reject the singularist intuition, but, for our purposes, it suffices to merely point out the strength of the intuition. As Armstrong puts the point,

That singular causation does exist, and that the world's work is done by such causing, is the natural assumption of all those who have not fallen under the Humean spell. Anybody who thinks about the mechanism of a thing or process, arguably even the physicist working at the level of quantum physics, is trying to determine the causal pattern of operation in the thing or process, and thinks of it as a causal pattern that exists at the singular level.⁵

3. Armstrong, *A World of States of Affairs*, see n. 1.

4. Armstrong is well-aware of this problem, it seems. Armstrong says that, "Tooley and Foster think of themselves as arguing for negative causation. And despite the merely possible nature of the case, it does, with its ease and naturalness, constitute some argument for the real, non-relational, existence of singular causation." (Ibid.: 204) However, it is clear that Armstrong only intends Tooley and Foster's case to give intuitive support for the singular causal view.

5. Ibid.: 204.

The trouble for the genuinist is that there doesn't appear to be anything that exists at the singular level to ground negative causation. The realists's alter call is heralded with the mantra, *from nothing, nothing comes*. Consider our paradigmatic example of negative causation, 'the absence of water caused the plant to die.' Armstrong says of this particular example that such a statement might well be true, but the truthmaker will not be a causal relation holding between an absence, the lack of water, and some effect, the death of the plant. An absence of water is nothing at all, and cannot, therefore, be causally productive.

6

There is some question as to how we should take Armstrong's admission of the 'truth,' of some negative causal statements with his insistence that there is no negative causation. I take Armstrong to be claiming that such true 'negative causal' statements are not true causal statements, but rather truths of some other kind.⁷ Armstrong quite clearly states that absences never enter into causal relations. And this is no surprise: if causation is a singular dyadic relation that obtains between a cause and its effect, then its *relata* must be entities, which absences certainly are not.

However, as earlier noted, he is willing to accept that many negative causal statements are true. We have two options for interpreting Armstrong's position. On the one hand, we might say that not all true causal statements express causal relations. But on this reading,

6. What exactly does serve as the truthmaker is left an open question in. (Armstrong, *A World of States of Affairs*, see n. 1) However, in later works, Armstrong has endorsed Phil Dowe's account of 'quasi-causation.' The idea is that putative negative causal statements express quasi-causation. So negative causal statements are really 'quasi-causal' statements that express possible, but not actual causation. (See: D. M. Armstrong, "Going Through the Open Door Again," in *Causation and Counterfactuals*, ed. Ned Hall John Collins and L. A. Paul (Cambridge: MIT Press, 2004))

7. See: Phil Dowe, "Review article: A World of States of Affairs by D. M. Armstrong," *Mind* 107, no. 427 (1998): 669–672.

it is unclear what, exactly, true negative causal statements express. On the other hand, we might say that statements of the form, ‘the absence of x caused y’ are very often true, but despite appearances, are not causal statements. I’m not sure what hangs on our choice at this point, but the latter option seems most amenable to the balance of Armstrong’s work on the matter.⁸ What matters for us now is that according to Armstrong, negative causal statements –whatever they express –do not express causal relations. Hence, there is no negative causation.

The degree to which a genuinist would object to Armstrong’s position thus construed is unclear. On the one hand, the genuinist may only insist that statements of the form, ‘the absence of x caused y’ are true and not worry too much about the underlying metaphysics. But such a small concession should not console the genuinist. I maintain that negative causal sentences are not only true, but express genuine causal relations; this is the only version of genuinism worthy of the name.

In this section, I have highlighted the strength of the causal realist intuition: We think that there is an objective fact as to what causes what at the singular level. If all and only what goes on at this level is genuine causation, then the genuinist must be able to account for absences at the singular level. I think that this can be done, and I offer an account that strives to do it in the final section. Before we get there, though, I set out Armstrong’s view of singular causation and reconstruct the arguments he provides against genuinism. Once his account is in place, I will be in a position to demonstrate that the version of genuinism I advocate is consistent with it.

8. Armstrong, “Going Through the Open Door Again,” see n. 6.

5.2 Armstrong's Account of Singular Causation

On Armstrong's view, causation is a contingent relation that depends on what occurs in the actual world. Concrete particulars do the causing, and, in turn, get caused. The intuition underwriting this view is strong. When a rock is thrown, strikes a window and the window breaks, the causal relation holds between that very rock and that very window –and nothing more. Singular causation is thus distinguished from regularity views of causation. On a regularity view of causation, the causal work is being done by the regularity –the natural law –that governs such event types. But Armstrong notes, as many have, that this gets the story of causation backwards. If causation is singular, then the actual causal happenings, the token cause-effect pairs, ground the nomic regularities, not the other way around.⁹

We can now state clearly the central tenet of singular causation: causation is an unmediated two-place relation between two particular entities, a cause and its effect. If a particular cause has two distinct effects, then there are two instances of causation.¹⁰ As we saw in the previous section, the motivation driving the view is powerful. When we have some uncontroversial instance of a causal relation, say a lightning strike that causes a house to catch fire, there is some contingent fact of the matter as to what particular thing, the lightning strike, and what particular properties of the lightning strike, the voltage or whatever, actually brought about the effect, the burning house, and the properties that the effect has. If we accept this highly intuitive characterization of causation, then we have, as a consequence, the view that causation is a relation that holds between actual first-order states of affairs. Furthermore, according to Armstrong, the existence of any particular causal rela-

9. D. M. Armstrong, *Truth and Truthmakers* (Cambridge: Cambridge University Press, 2004): Ch. 10.

10. Armstrong, *A World of States of Affairs*, see n. 1: 202.

tion is entirely independent from what ever else is the case. I will explicate each feature in turn.

Consider the first feature that causation is a second-order relation that holds between first-order states of affairs. In his (1997), Armstrong argues that states of affairs are the most fundamental ontological structures. They are individuated by their constituents: particulars, properties, and relations. But this isn't enough; the constituents of identical states of affairs must bear the same structure. Consider an example. Take a relatively course grained state of affairs, that John loves Anne. This has three constituent elements: the particulars 'John' and 'Anne,' and the relation 'loves.' This state of affairs shares precisely the same constituents as some other possible state of affairs, that Anne loves John. However, the structure differs, and the two states of affairs are, as they should be, distinct.¹¹

This consequence further suggests the second feature of Armstrong's account. The causal relation is independent of what happens else where in the world. Generally, states of affairs are independent from one another just in case no state of affairs entails either the existence or the non-existence of any distinct state of affairs.¹² Armstrong's argument for this requirement is fairly complex, and would take us too far afield. Briefly, the idea is that the rejection of independence entails necessary connections between universals or state of affair types. Though this seems innocuous enough in limited cases, Armstrong argues that we are unable to temper this consequence, except in an *ad hoc* fashion. Such necessary connections are multiplied beyond reason. The constraint of independence is intriguing and worthy of investigation. However, it is beyond the scope of the current discussion and I will assume the requirement.

11. Armstrong, *A World of States of Affairs*, see n. 1: 121.

12. *Ibid.*: 139, 202.

Causation thus construed is a second-order relation that holds, contingently, between distinct first-order states of affairs. The existence of the causal relation and the existence of the terms of the causal relation are independent of whatever else exists or doesn't exist. So far, I have only laid out the very basics of Armstrong's view. His is a rich view, and it would be unmanageable to conduct a full treatment of it here. Instead, in the next section, armed with a basic understanding, I will flesh out the account with respect to our current interest, negative causation.

5.3 Armstrong Against Negative Causation

We are working with a basic conception of causation as an external, second-order relation that holds between first-order states of affairs. First-order states of affairs are ontologically primitive and independent from all other distinct states of affairs. Given this understanding of the causal relation, there is a sense in which negative causation is ruled out by hypothesis. Since negative causation is either an instance of an absence causing or being caused, negative causation only exists if there are negative states of affairs. And, by Armstrong's lights, there are no negative states of affairs. As for negative causation without negative states of affairs, recall the realist mantra: From nothing, nothing comes. Earlier, I discussed an ambiguity in Armstrong's view about negative causation. He admits that some statements of the form, 'the absence of x caused y' are true. However, on the interpretation I endorsed, such statements do not express causal relations. We are now in a position to substantiate that interpretation.

On Armstrong's view, causal truths have as their truthmaker only first-order states of affairs. Since we have assumed that there are no negative states of affairs, there can be no negative causal truths. (Here I accept for the purposes of argument that truths need truth-

makers.) We can now reconstruct Armstrong's argument against the existence of negative causal truths, if only roughly.

P1 If there are no negative first-order states of affairs, then there are no negative causal truths.

P2 There are no negative first-order states of affairs.

C There are no negative causal truths.

For premise 1, we have already seen Armstrong's argument that causation is a relation that holds only between first order states of affairs. On the face of it, we get premise one for free. If a negative statement of the form 'the absence of x causes y' is true and expresses a causal relation, then we might – quite naturally – think that the relevant causal relation holds between 'the absence of x' and 'y.' If we convince ourselves that there is no such state of affairs as 'the absence of x,' then there exists no entity for y to be causally related.

But the story is not quite this simple; some subtleties need to be teased out. We have introduced a new requirement for a truthmaker. It is one thing to talk about the ontological status of the causal relation and the terms of that relation, and quite another to talk about causal statements. Truthmakers are the 'ontological ground' for any true proposition; truthmakers guarantee the truth of the proposition they ground. And this guarantee is that of metaphysical necessity. So, the truthmaker for a causal proposition is the particular causal relation and the particular terms of that relation. As Armstrong puts it, "[T]he truthmaker for causal truths is to be found solely in the world in which the relation holds."¹³ Perhaps the requirement that the truthmaker relation is internal, hence necessary, isn't obvious. However, this is readily established. If the truthmaker relation were contingent,

13. Armstrong, "Going Through the Open Door Again," see n. 6: 445.

then it would only ground the relevant true proposition in this world. If we take the truthmaker requirement seriously, then we need to know what makes the difference. In virtue of what does the truthmaker ground some proposition P in this world but not some other? As Armstrong puts it,

A contingently sufficient truthmaker will be true only in circumstances that obtain in this world. But then these circumstances, whatever they are, must be added to give the full truthmaker.¹⁴

The upshot is that if we add those circumstances to consider the full truthmaker, we discover that the full truthmaker does necessitate the truth of the proposition. Hence, the truthmaker relation, if it is to do the job for which it is required, must be a necessary relation. The requirement that truthmaking is an internal and thus a necessary relation is surely correct, if truthmakers are required for truths at all. After all, truthmakers are the actual entities which are supposed to guarantee the truth in question.

If Armstrong is correct, then the truthmaker for a causal truth must be first-order states of affairs which necessitate the causal truth. Thus, if there are true negative causal statements that express genuine causal relations, there must either be first-order states of affairs which necessitate negative causal truths or negative states of affairs. Armstrong argues against both options.

To do so, he considers a simple world, consisting of only two states of affairs, where a is G and b is F. Straightforwardly, the truth that a is G is grounded by the state of affairs that a is G: The actual state of affairs such that a is G necessitates the truth that a is G. However, a's being G does not necessitate a's not being F, and so cannot serve as its truthmaker. Therefore, a putative negative causal statement, 'a's not being F caused b's being G' cannot

14. Armstrong, *A World of States of Affairs*, see n. 1: 116.

express a genuine causal relation. This follows from Armstrong's account since any putative causal truth involving a's not being F lacks a first order state of affairs as a truthmaker. If the putative cause lacks a first-order state of affair as its metaphysical ground, then no statement in which that putative cause enters can express a causal relation. The idea is that a positive first-order state of affairs alone simply cannot serve as a truthmaker for a negative truth, since positive truths do not by themselves necessitate any negative truths.

However, there surely are negative truths of some form or fashion, and they too need truthmakers. Since, as Armstrong argues, they can't be first-order positive states of affairs, negative truths must have as their truthmaker either negative states of affairs or higher order-states of affairs. Armstrong argues for the latter. He argues that negative truths require a second-order state of affairs totality. Return to the small world of our earlier example, where a is G and b is F. In this small world, it is true that a is not F and b is not G. But what ensures that these negative truths are true? Armstrong puts his answer thusly,

One thing that would ensure that the two negative truths are true would be for the two positive states of affairs to be the only first-order states of affairs in this small world. What sort of state of affairs would this be? It would appear to be a second-order state of affairs: the fact that the first-order states of affairs were all the first order states of affairs. With this fact or state of affairs as truth maker the two negative truths, and any other negative truths that obtained in this world, would supervene.¹⁵

If Armstrong is right, then negative truths require both first-order states of affairs and a second-order state of affairs totality. That is, the truth that a is not F is true just in case a is G and nothing more. The 'nothing more' is given to us by the second-order state of affairs totality. We might think that it would just be simpler to posit negative states of affairs in lieu of some second-order state of affairs. But, Armstrong argues that even the

15. Armstrong, *A World of States of Affairs*, see n. 1: 134.

addition of negative states of affairs does not render the need for second-order states of affairs obsolete. Even if we did admit to our small world two positive states of affairs – a is G and b is F – and two negative states of affairs – a is not F and b is not G – we would still need the additional fact that those four were the only first-order state of affairs that exist. For instance, we would need the second-order state of affairs totality to ground the negative truth that a is not H. And Armstrong is right on this point; we either require a second-order state of affairs or face an unpalatable ontological explosion of negative states of affairs. (Such an explosion would not be ontologically serious.) In essence, the second-order state of affairs totality draws the boundaries for the world and those boundaries must be drawn no matter what first-order states of affairs we admit.

If we need the state of affairs totality anyway, and we can do all the metaphysical work without negative states of affairs, we should not posit them. On the face of it, this is bad news for the genuinist. Once we accept the requirement that causal truths must only require first-order states of affairs as their truthmaker, we are either forced to choose one of two positions: Either there are negative states of affairs or some positive states of affairs alone manage to necessitate negative truths. I think Armstrong is right on the former option. Negative states of affairs are not only redundant but spooky. The trouble is that there seems to be no way of tempering just which negative states of affairs we admit. It might seem plausible to suggest that there exists some state of affairs such that Marie is not at the conference, but, once we accept that, it seems that we must also accept that there exists the state of affairs such that Napoleon isn't at the conference either. Without a principled way of delimiting just which negative states of affairs exist, we suffer an ontological explosion.

Armstrong has also rejected the possibility that some positive states of affairs necessitate some negative truths. It is on this point that I challenge Armstrong. (Hence, I reject P1

of my earlier reconstruction.) The previous sections demonstrate Armstrong's point that if we are to account for causation in an ontologically serious manner, negative causation is not genuine causation. In essence, ontological seriousness requires that we find an actual, metaphysical foundation for causal claims. Without such a foundation, the genuinist is on soft ground. In the next section, I argue that there is a class of negative causal truths that meet Armstrong's requirements for ontological seriousness. I argue that some negative causal statements do have as their truthmaker all and only actual, first-order states of affairs. For this class of truths, no recourse to higher-order states of affairs totality or negative states of affairs is required. I further argue that some members of this class of negative truths are negative causal truths.

5.4 Toward a Realist Account of Genuinism

The goal of this section is to provide an account of genuinism consistent with the demands of Armstrong's singular causation. I believe that accomplishing this goal will do more than merely show that negative causation is consistent with Armstrong's account. There are many philosophers of causation which are unfriendly to the possibility of negative causation, but Armstrong's account is among the least amenable to the genuinist. It is my view that the approach I advocate in this section will be consistent with a wide variety of theories of causation. (This more ambitious goal must be pursued elsewhere; however, as I argued in the previous chapter, my account is adaptable to a process theory of causation, as well.) So far, we have seen two ways that we might account for negative causation in the framework of Armstrong's singular causation. One way is to postulate negative states of affairs, but this is surely problematic. The other way is to show that some negative causal truths can meet the same truthmaker requirement as ordinary positive causal truths. I will accept for

present purposes Armstrong's requirement that causation is a relation that holds between all and only first-order states of affairs. The acceptance of this requirement *prima facie* rules out a certain kind of genuinism. We might consider a version of genuinism where the truth of a negative causal statement ontologically commits us to the existence of absences. Such a version of genuinism is clearly incompatible with Armstrong's account. However, I think that a more plausible version of genuinism need not make such ontological commitments. The version of genuinism to be defended is that negative causal statements are very often true and express genuine causal relations. This version is not committed to 'absences' as an ontological addition.

Before attempting a general characterization of my version of genuinism, consider an example. Take the negative claim that a is not red. I argue that this negative claim only requires an actual first-order state of affairs for its truthmaker. The idea is this: a is not red just in case a is, as a matter of fact, blue, yellow, etc... No second-order state of affairs totality is required. The idea is that a state of affairs totality wouldn't do any additional work: a's being blue is metaphysically sufficient for b's not being red. Here we have a negative truth that doesn't need the state of affairs totality for its truth, but only actual, first-order state of affairs.

At this stage, I should note that my proposal requires a substantive metaphysical assumption: that some thing cannot – at the very same moment – be both red and yellow all over. More generally, I claim there are certain properties which are metaphysically exclusive of other properties within a certain range. Some thing's being blue is exclusive of its being red; some thing's being circular is exclusive of its being square.

We can characterize the general class of such negative truths by appealing to the notion of a contrary class. Following Ruth Millikan, a contrary class is a set of properties that are

metaphysically mutually exclusive. When we discussed Armstrong's small world in the previous section, with only the state of affairs that a is F and b is G, we were led to believe that a's being F did not necessitate a's not being G. This assessment is correct only if it is metaphysically possible for some entity to be both F and G at the very same time. But if F and G are members of the same contrary class, then a's being F does necessitate that a is not also G. Millikan puts the general characterization of a contrary class thusly:

Properties (monadic or n-adic) that fall into the same range are properties that are contraries of one another. For example, whatever is red cannot at the same time be green, what has only with atomic number seventy-nine cannot also have only atoms with atomic number seventy-eight or atomic number sixty-five, and what is beside a thing cannot at the same time be on top of it... [T]he very identity of a property or property area is bound to the identity of the wider range from which it comes, hence bound to the identity of its contraries.¹⁶

Of course, the notion of contrary classes requires the metaphysical assumption I earlier endorsed. But I think that that assumption is well-motivated. For an atom of a particular element to have the atomic number that it does necessitates that it does not also have some other atomic number. Some object can no more be red and blue all over any more than it can be both red and not red. (If one prefers to avoid talk of secondary properties, we can easily adjust and talk of surface reflectance properties. For simplicity, I will confine my examples to the domain of color.)

We can now consider some negative truth, a's not being F, which has as its truthmaker the first-order state of affairs a is G just in case F and G are members of the same contrary class. This is the prize for the genuinist because in such cases we have negative truths

16. Ruth Garrett Millikan, *Language, Thought, and Other Biological Categories* (Cambridge: The MIT Press, 1984): 268.

which have as their truthmaker only first-order states of affairs, and such truths can enter into causal statements.¹⁷

To demonstrate the role that such truths might play in negative causation, consider the following example. STOPLIGHT: A machine outputs STOP if the input is red and GO if the output is any other color. We would say that the input a, causes output GO if a is not red. And this, I claim, is a genuine negative causal truth – even on Armstrong’s account of singular causation – since a’s being not red has as its truthmaker a’s being, in this particular case, blue. And we need not invoke a state of affairs totality, since a’s being blue is metaphysically sufficient for a’s being not red. Hence, the presumed truthmaking relation from the state of affairs a is blue to the negative truth that a is not red is internal.

The idea is that a’s not being red has as its truthmaker only the positive state of affairs that a is blue. This state of affairs enters into the causal relation with the effect, the output GO, or more properly, the state of affairs that is the truthmaker for the simple proposition that ‘the machine outputs GO.’ Therefore, the negative causal claim, that ‘a’s not being red causes the output GO’ is true and expresses a genuine causal relation. This is in virtue

17. I should consider a complication that my approach raises, that the same state of affairs can be the truthmaker for a variety of truths. a’s being blue is the sole truthmaker for both the proposition that a is blue and the proposition that a is not red. But this is consistent with Armstrong’s view. Moreover, he endorses the one-to-many truthmaker relation explicitly: Now consider the truths that a is hot and that a’s molecules are in more or less violent motion. The two statements are surely not the same statement: the difference in their meaning ensures that here we have two different truths. Yet we do not have here two different states of affairs. a’s heat is the motion of a’s molecules and, if the assumptions of the previous paragraph are correct, no other states of affairs are implicated in the predicates. So two truths with only one truthmaker. (Armstrong, *A World of States of Affairs*, see n. 1: 130) Clearly, there is no general problem for a single first-order state of affairs serving as the metaphysical ground for a variety of truths, negative and positive. The next step in my argument is to show that negative truths of the sort I have described can figure into negative causal claims.

of the fact that the simple proposition that ‘a is not red’ has as its truthmaker the causally efficacious state of affairs, the actual color of the input.

On Armstrong’s view, a statement expresses a causal relation just in case the constituents of the truthmaker for that statement enter into the causal relation with one another. This condition is met in STOPLIGHT. The state of affairs that the input is blue causes the output GO and grounds the truth that the input is not red without appealing to negative states of affairs or the state of affairs totality. This is negative causation at the singular level. And the genuinist has all she needs to succeed from within Armstrong’s framework; we have a negative causal statement whose truthmakers are all and only first-order states of affairs that enter into causal relations with each other. In the case of negative truths concerning contrary classes, we have just that.

If we accept the intuition that properties from the same contrary class are exclusive from one another, than we can easily accommodate the internal truthmaker requirement for certain negative causal truths. However, it might be objected that when we say that a is not red, we may not mean that a is blue. We may not know the actual color of red, or, as it might be the case for some contrary classes, we may not know of the other properties in that class. But, a property’s membership in a contrary class is a metaphysical, rather than an epistemic, matter. The same is true for truthmaking. We may not know the truthmaker for any given positive truth, yet all that matters is that the appropriate metaphysical relation holds between the truth and its truthmaker. What we mean when we assert a negative truth isn’t the issue. Rather, the truthmaker relation obtains independent of our knowing it.

I have given the general requirements for genuine negative causal truths, and we can take this general schema and populate a number of genuine negative causal truths to vindicate our intuitions about negative causation. To start, consider our paradigm case, NO

WATER: I fail to water my houseplant and the absence of water causes it to die. For simplicity, we bracket off the issue of agential action or inaction. Consider only the negative causal claim that ‘the absence of water causes the plant to die.’ On my view, this is a genuine causal claim, and we can approximate the states of affairs which serve as its truthmaker. The effect in this case is the state of affairs that is the state of the plant, i.e., that it is dead. The cause is the state of affairs that is the actual condition of the soil surrounding the plants roots.¹⁸ For my account to work, it must be the case that the truthmaker for the simple proposition, ‘that water is absent’ must be only some first-order state of affairs. If the state of affairs totality is required for the truth of this negative proposition, then my account fails to vindicate genuinism.

I maintain that the state of affairs totality is not necessary; the first-order positive state of affairs that is the actual condition of the soil is metaphysically sufficient for the truth of the proposition that water is absent. The first-order state of affairs is the very amount of moisture present in the soil. If the soil contains 25 mL of water, it cannot at the very same time contain 100 mL of water. And it wouldn’t matter if the soil was entirely dehydrated. ‘Wet’ and ‘dry’ are members of the same contrary class; what ever is wet cannot be, at the very same time, dry.

A possible objection to my analysis of NO WATER is that wet and dry are not contraries. Perhaps when we say that something is dry, we don’t mean that it is devoid of water. We often say that soil is dry if, in certain contexts, more water is expected or re-

18. Of course, we are playing fast and loose with the causal chain that begins with dry soil and ends with plant death. Though it would be more complicated, we could tell a similar story about the turgor pressure of the plant that results, by osmosis from a dry condition of the plant’s immediate environment. Fortunately, there is no need to complicate our current case.

quired. If expectations or requirements were different, we might say of soil in the very same state that it is wet. (I am imagining what we might say of soil used for growing orchids versus cacti.) This quite rightly points out that what we mean by ‘wet’ and ‘dry’ may be contextually dependent. But this just shows that the proposition we express when we utter the sentence ‘the soil is dry’ will be contextually determined. Our concern runs deeper. We are concerned with the truthmaker for the proposition expressed. Perhaps, when in the context of orchid growing, when we say that water is absent we express the proposition that the soil contains less than 10 mL of water per 100 g of soil. In all likelihood, we express something more vague, but it doesn’t change what we should say about the truthmaker. 100 g of soil cannot contain less than 10 mL of water and, at the very same time, contain 100 mL of water. The truthmaker for the proposition expressed is the actual state of the soil, and the state of affairs totality is not required.

I have shown that if we accept the assumption that certain properties are metaphysically exclusive of certain distinct properties within a particular domain, then Armstrong’s account of singular causation is consistent with genuine negative causation. It might be objected that what I describe is not genuine negative causation. But recall the version of genuinism I have described: Negative causal statements can be true and express genuine causal relations. In order to express a genuine causal relation, then the truthmakers for the causal relation given by the statement must be only first-order states of affairs. In the cases I have described, the truthmakers for the absences are only the first-order states of affairs. In these cases, and any case like them, the relation expressed by the negative causal statement is a genuine causal relation.

Chapter 6

Afterword

6.1 Back to Brass Tacks: Absences as Causes?

As I noted in the opening lines of this dissertation, causation is fundamentally about change and the way that change is brought about. Causal claims feature intimately in our understanding of the goings-on of the world. We often make causal claims when doling out praise and blame. We often cite causes when offering explanations. And we certainly depend on causal reasoning when deliberating about how to bring about desirable ends and prevent undesirable ones. Yet the metaphysics of causation is a thorny matter; causation is as ubiquitous as it is confounding.

This dissertation has addressed a basic puzzle about causation. Very often it seems that absences are causes or effects. That is, it seems that negative causation is genuine causation. However, our most basic philosophical commitment about causation is that it is a relation. And this has been well-rehearsed throughout: Relations need *relata*, and those *relata* are missing in cases of negative causation. Something has gone awry.

Reviewing our options, we can either reject the possibility of negative causation, or reject the relational nature of causation. For philosophers of causation who take the metaphysics of causation seriously, these are widely regarded as the only options. I have argued that they are not. When causes or effects go missing, we can find them. Negative causal

claims are only negative at the level of description and language – not at the level of metaphysics.

The crucial insight of this dissertation is that negative causal claims do not make any ontological commitments to the existence of negative entities. For absences to be causes and effects, there need not be any *absences* at all. Negative causation is genuine causation just in case negative causal claims can be true and express genuine causal relations. In this way, negative causation is not different in kind from positive causation.

There are, however, subtleties that need to be teased out. The most straightforward negative causal claims are those where we cite that an absence of some thing is a cause or an effect. For example, “An absence of water caused the houseplant to die.” Here, we need only for the actual condition of the plant’s environment to necessitate that there is no water. We get this quite easily, using the account I detailed in Chapter 5. The actual state of the soil is sufficient for their to be an ‘absence of water.’ So the ‘absence of water’ is not a metaphysical absence at all, but the actual state of the soil – an entity.

However, there is a class of more difficult cases. Refer to another example I have often invoked, “My failure to water my houseplant caused it to die.” Cases like this involving an agent’s failure to do something are admittedly more difficult. It seems that the very state of the houseplant’s potting soil does necessitate that I didn’t water it, but it also seems to necessitate that President Obama didn’t either. This, as you will recall, is akin to the ontological explosion of causes which makes the non-relationalist account so unpalatable.

What my account needs is a way to assign ownership, of sorts, to failures to act. We need a way to say that the particular absence of water is *my failure to water and not Obama’s*. In Chapter three, I highlighted a contextualist assumption which accommodates this need. There I argued that ‘President Obama’s failure to water my houseplant’ is a pos-

sible description for the actual state of my houseplant's soil, but only in bizarre contexts. In ordinary contexts, only my failure to water my houseplant describes the actual state of my houseplant. If, in some context, Obama did promise to water my houseplant or I otherwise expected him to, then his failure to water it would describe the actual state of my plant. The upshot is that there is no ontological explosion, only an explosion of descriptions, and even this can be adequately reigned in by an appeal to the context in which the description features.

Thus, my account of relationalist genuinism is distinguished from non-relationalism. If non-relationalism is true, then it is true that 'Obama's failure to water my houseplant caused it to die.' The explanation is that it would be merely infelicitous to mention. On my account, in nearly every context, it is false. Obama's failure to water my houseplant doesn't cause it to die. The explanation is simple: He didn't *fail* to water it. The fact that someone didn't water a plant does not entail that the person failed to water it. Whether or not someone fails to do something is dependent upon context. If he didn't fail to water it, then there is no failure of his which could cause it to die. This requires a significant contextualist assumption, which I have not explicitly developed or defended. To do so is a worthy project, to be taken up elsewhere.

To be sure, a non-relationalist could employ the contextualist features of my own account to render their's more plausible. But this is otiose. The primary motivation for non-relationalism has been the preservation of negative causation. I have demonstrated that we need not reject the relational nature of causation to do so. Non-relationalism is a solution without a problem.

In this dissertation, I have helped myself to the contextualist assumption without offering a full defense of it. The central purpose has been to demonstrate that we can account

negative causation as genuine causation without rejecting relationalism. And this much I have done. An absence of water can cause a plant's death and water can prevent it. I have established my thesis by establishing that negative causation is genuine causation. A further question, which requires additional future research, is to investigate the scope of the thesis. A full defense of the contextualist assumption will demonstrate that it is my failure to water my plants that causes their death, whereas Obama's failure would cause the death of *his* houseplants.

In addition to an investigation of the contextualist assumption, there should also be an inquiry into the implications of my account of negative causation in other domains of philosophy. In the next section, I review several of these projects, and in doing so, reiterate some of the central motivation for vindicating negative causation.

6.2 Applications

Imagine a man who happens upon a drowning child he could easily save. In the example, the man does nothing and the child dies. Intuitively, the man is at least partly morally responsible for the child's death. Such examples are meant to highlight difficulties in moral theories that consider causal responsibility a necessary condition for moral responsibility.¹ Similar problems are endemic to any philosophical account that makes essential use of causation. Just as the aforementioned example highlights a tension between our intuitions about moral responsibility and causation, it also highlights a tension between our intuitions about explanation and causation. Intuitively, citing the man's failure to act partly explains the child's death. But not so, if you believe that a standard causal theory is correct and that

1. For an alternate approach, see (Sartorio, "How To Be Responsible For Something Without Causing It," see n. 9). Sartorio argues that moral responsibility does not require causal responsibility, even if absences can be causes.

explanatory information just is causal information. As such, the man's failure to save the child can't explain her death since he didn't cause it.

If we accept the causal condition for moral responsibility, then the relationalist must conclude that the man is not *morally responsible* for the child's death in virtue of his not being *causally responsible*. The relationalist's challenge is to account for moral responsibility in a manner that does not assume causal responsibility. As I suggested in the introductory chapter, this is no small task. It seems that the non-relationalist is on better footing – the man is causally responsible for the child's death. Unfortunately, so is everyone else who didn't save the child. The non-relationalist's challenge is more tractable. The non-relationalist need only provide an account of moral responsibility which distinguishes the effects of our actions that we are morally responsible for from those that we are not. However, given the range of things that we cause on the non-relationalist account, the causal condition of moral responsibility does little work. After all, if the non-relationalists are correct, then we cause anything we could have prevented. The range of what we could have prevented is relatively unconstrained.

Though it is worthy of an independent investigation, I take it that the causal condition is well-founded and crucial to our moral reasoning. But the relationalists must work around it and it is a minor player for the non-relationalist. I have argued throughout that preserving the causal condition for morality, as well as causal conditions in other domains of philosophy like and explanation, is a primary motivation for accounting absences as causes and effects.

Avoiding the ontological explosion noted in the previous section is a key reason for avoiding non-relationalism. I have also offered a *prima facie* case for relationalism. Non-relationalist accounts embrace negative causation whole-heartedly, but in doing so usurp

everything we thought we knew about causation. If it is not essentially relational, then the causal ‘connection’ is no connection at all. Causes need not bring about their effects, and if they do, it is merely accidental. Furthermore, if causation requires no connection between causes and their effects, then the ‘secret connexion’ that Galen Strawson so articulately argued for is even more mysterious. *It is no connection at all.*²

Once we lose the *connection* essential to causation, it seems that causation is no longer able to serve the purposes for which causation is crucial. The causal condition for moral responsibility serves to make good on the intuition that we are only morally responsible for outcomes which we, in some way, *bring about*. Additionally, causation is crucial to the sciences, in part, because we want to know how to intervene in the world. We seek to know what will bring about desirable outcomes or prevent undesirable outcomes.

If causation is not a relation, then it is entirely unclear what causation is. Lewis most famously maintains that causation is the ancestral of counterfactual dependence. Undoubtedly, this entails that causation is a relation, and rejecting the relational nature of causation leaves a serious gap in our understanding of it. Furthermore, the structure of our grammatical usage of causal terms is homologous with the structure of other relational terms. If we do not understand causation as a relation, then we are left without the resources to understand it at all.

The primary motivation for non-relationalism is the preservation of negative causation. If negative causation is genuine causation and negative causation inconsistent with relationalism, then relationalism is false. Perhaps the loss of relationalism is unfortunate, but truth is often insensitive to our fortunes. This is one case where I think that truth is in our favor.

2. Galen Strawson, *The Secret Connexion* (New York: Oxford University Press, 1992).

Throughout this dissertation, I have resisted the non-relationalist approach as *unnecessary*. I have argued that the inconsistency of negative causation and relationalism is only apparent; it issues from a misunderstanding of negative causation. While relationalism of all stripes requires entities to serve as the causal *relata*, I have argued that negative causation does not entail that those *relata* are missing. Instead, I have argued that genuinism, the view that negative causation is genuine causation, only requires that negative causal statements be true and express genuine causal relations. Armed with a proper understanding of genuinism, we are positioned to develop an account negative causation that vindicates our commonsense judgments about particular cases without running afoul of our relationalist commitments.

But the prize is not merely the vindication of commonsense. We preserve the role causation plays in ascriptions of moral responsibility, explanation, perception, and scientific reasoning. In the introduction, I spoke of the central role of a causal condition for both moral responsibility and perception. Without offering a defense of these requirements, I highlighted both the intuitive pull of those commitments and the widespread philosophical commitment to them. We are very often morally responsible for that which results from our inaction, as well as that which we prevent as a result of our actions. Furthermore, there is widespread consensus on the existence of a causal condition for perception. For it to be true that I see my hand before me, then my hand must be causally responsible in whatever way required by the relevant sense modality for its looking to me as if my hand is before me. And yet I can see holes in the road (absences of pavement), and the dark room (devoid of light).

The causal conditions for moral responsibility and perception suggest that negative causation is genuine causation in a way that goes well-beyond the mere intuitive pull of our

judgments about particular cases. If negative causation is not genuine causation, then there surely is no causal condition for either moral responsibility or perception. The matter of perception makes the case most clearly: We do see holes, dark rooms, and there is a way that complete silence sounds.

In matters of moral responsibility, the killing and letting die distinction has long been a matter of controversy. And the difference is a difference of causation. Advocates of the distinction contend that we are most directly responsible for consequences that we bring about by our actions. Returning to the central example in Chapter 3, when Johnny failed to turn off the gas, he *let* the explosion happen. He did not, as advocates of the distinction would argue, cause it. My account suggests that advocates of the distinction have it wrong. Johnny does not merely let the explosion happen; he causes it. So Johnny explodes the room just as he would if he initiated it by more direct means. Admittedly, what I have said sounds counterintuitive. But this is nothing more than the *real* intuition of difference that I argued for in Chapter 4. In certain contexts, Johnny's negligence might be less salient, but not in all. It is not hard to imagine a scenario where Johnny's negligence is all that matters. In those contexts we say things like, "Johnny might as well have lit the match." In a similar manner, James Rachels argued that the distinction between killing and letting die is merely apparent, owing more to particular details of the case than any principled distinction between killing and letting die.³

An interesting and productive future research project involves a more careful examination of my account in the domains of both moral responsibility – in particular the killing and letting die distinction – and perception. My version of genuinist relationalism has im-

3. For an argument for this conclusion see James Rachels, "Reasoning about Killing and Letting Die," *The Southern Journal of Philosophy* 19 (1981): 465–473.

plications in both domains. It affects both what we should say about the causal condition for each, and it will serve a productive purpose, providing the metaphysical resources to handle difficult problems that emerge when absences are considered.

In the domain of explanation, I have argued in Chapter 3 that an adequate account of causal explanation requires negative causation. Lewis's account of causal explanation only requires that a causal explanation provide some information about the causal history of an event. If we deny negative causation, two problems emerged. First, if that causal information need not specify causes, then nearly anything can count as a causal explanation. The famous counterexamples which felled the D-N model of explanation turn out to be explanations on Lewis's account. The length of the shadow does explain the height of the building: it tells us that the cause of the buildings height enabled the building to cast a shadow of that length. The second problem, and I think the more troubling one, concerns explanations of what doesn't happen. Lewis's account requires that a causal explanation provide information of an *event's* causal history. But, when we attempt to explain absences, there is no event. Thus, there is nothing to explain. The natural suggestion, the one favored by Achille Varzi, is to allow the absence to pick out the relevant event or set of events to be explained. And this motivates the account of negative causation that I developed. If we allow negative descriptions to pick out events – the *explanandum* – for explanations, then negative descriptions should be able to pick out events – the causal *relata* – for negative causal statements.

The conclusions I draw about negative explanations pave the way for a metaphysical foundation for causal reasoning. Recent work by Peter Spirtes, Clark Glymour, and Richard Scheines, as well as independent work by Judea Pearl, develop a methodology for making

causal inferences based on causal models.⁴ Though the accounts differ in their details, the core is similar. Each develop models which represent correlated variables that justify causal inferences according to a manipulationist strategy.

James Woodward provides a statement of the Manipulation Theory of Causation:

A necessary and sufficient condition for X to be a (type-level) direct cause of Y with respect to a variable set V is that there be a possible intervention on X that will change Y or the probability distribution of Y when one holds fixed at some value all other variables Z_i in V. A necessary and sufficient condition for X to be a (type-level) *contributing cause* of Y with respect to variable set V is that (i) there be a directed path from X to Y such that each link in this path is a direct causal relationship; that is, a set of variables $Z_1...Z_n$ such that X is a direct cause of Z_1 , which is in turn a direct cause of Z_2 , which is a direct cause of $...Z_n$, which is a direct cause of Y, and that (ii) there be some intervention on X that will change Y when all other variables in V that are not on this path are fixed at some value. If there is only one path P from X to Y or if the only alternative path from X to Y besides P contains no intermediate variables (i.e., is direct), then X is a contributing cause of Y as long as there is some intervention on X that will change the value of Y, for some values of the other variables in V.⁵

On a manipulationist account, causation is taken to be a relation of variables, where variables are properties or magnitudes that are capable of having more than one value. One advantage of the manipulability theory is that, unlike event causation, it is clearer how to handle non-binary variables.⁶ The crucial feature of such accounts is the ‘directed graph.’ A directed graph is an ordered pair $\langle V, E \rangle$, where V is a set of vertices that serve as variables representing the *relata* of the causal relation, and E is a set of directed edges connecting these vertices. The basic idea is that some event type X is a cause of some

4. Peter Spirtes, Clark Glymour, and Richard Scheines, *Causation, Prediction, and Search* (Cambridge, MA: MIT Press, 2000); Pearl, see n. 4.

5. Woodward, *Making Things Happen: A Theory of Causal Explanation*, see n. 4: pg. 59.

6. I argue that this advantage can be had by event causal accounts as well.

event type Y if and only if the influence of X on Y is not mediated by any other variable in the system of interest V . So, a possible manipulation of X would change Y when all other variables in V are held fixed. The upshot with regard to negative causation is that if the removal of X – its absence – issues a change in Y , then the absence of X is the cause of Y .

Neither Sprites, Glymour, and Sheines, nor Pearl are concerned with the metaphysical underpinnings of their account of causal inferences. However, it should be clear enough that if absences are not causes nor effects, a system of causal inference that judges that they are makes bad inferences. The value of such a system would be severely undermined. Fortunately, I do not think that their methodology would be given to systematic error, at least not with regard to the issue of negative causation. Nonetheless, what Woodward – a fellow advocate of the manipulationist account – has to say about negative causation is less than satisfying. He recognizes the ontological explosion that results from untempered negative causation. The manipulationist account would entail that President Obama’s failure to water my houseplant is a cause of its death. As he recognizes, we need some “independent grounds for excluding these” causes. The rationale he offers is simply that they are “not a serious possibility.”⁷

This rationale simply will not satisfy the opponents to negative causation, nor should it. We need to account for negative causation in an ontologically serious manner, for this provides us a principled rationale for excluding spurious causes. The account of relationalist negative causation does just that. It provides the metaphysical foundation that is required for accounts of causal inference and it does so in a way that excludes possible causes which *are not serious possibilities*.

7. Woodward, *Making Things Happen: A Theory of Causal Explanation*, see n. 4: 91.

6.3 Conclusion

The fundamental critique of negative causation is that the causal *relata* are missing. But their absence is only apparent. I agree that causation requires that both cause and effect exist, but I deny that negative causation entails that they don't. Not only are absences intuitively causal, as in the contexts of explanation and moral responsibility, they are genuinely causal. But genuinely causal absences does not require genuine absences. Absences are only negative descriptions of entities, and those entities are the events, objects, processes, or states of affairs that bear causal relations to one another.

I have shown that my account of negative causation satisfies the machinery of several prominent accounts of causation. The real prize is that these accounts are – at face value – among the least amenable to the possibility of negative causation. Though it must remain at open question for the time, I believe that my account is consistent with any theory of causation. It is, at base, an account of absences that is modular enough to supplement any metaphysics of causation and powerful enough to enable causation to play the theoretical role it must play. Whether it is moral responsibility, explanation, perception, or causal inferences *absences matter*. Fortunately they exist just as ordinary positive entities do; *they are ordinary positive entities*.

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