Legal Theory, **23** (2017), 1–26.
© Cambridge University Press 2017 0361-6843/17
doi:10.1017/S1352325217000040

PARTIAL LIABILITY

Alex Kaiserman
Balliol College, University of Oxford

Abstract

In most cases, liability in tort law is *all-or-nothing*—a defendant is either fully liable or not at all liable for a claimant's loss. By contrast, this paper defends a causal theory of *partial* liability. I argue that a defendant should be held liable for a claimant's loss only to the degree to which the defendant's wrongdoing contributed to the causing of the loss. I ground this principle in a conception of tort law as a system of corrective justice and use it to critically evaluate different mechanisms for "limiting" liability for consequences of wrongdoing and for "apportioning" liability between multiple wrongdoers.

I. INTRODUCTION

Many legal theorists are skeptical of talk of "degrees of causal contribution" in the law. "[C]ausation . . . exists or it does not," Richard Pearson reminds us, "and if it does exist one does not speak of 'degrees of causation.'"[1] Richard Wright agrees that "[c]ausation . . . is not a matter of degree," because "[s]ome condition either was or was not a cause (in the proper scientific sense)."[2] Kit Barker and Jenny Steele go as far as to describe "the idea [of] relative causal contributions to an injury that is indivisible" as "seemingly oxymoronic."[3] And the most recent Restatement of Torts is "quite explicit" in its opinion that "there are no degrees of factual cause."[4]

This skepticism, however, is unwarranted. Although causation *is* a non-scalar relation, it is nevertheless a relation to which multiple events can contribute to different degrees. After sketching out my preferred theory of

1. Richard N. Pearson, *Apportionment of Losses under Comparative Fault Laws—An Analysis of the Alternatives*, 40 La. L. Rev. 343, 346 (1980).

2. Richard W. Wright, *Allocating Liability among Multiple Responsible Causes: A Principled Defense of Joint and Several Liability for Actual Harm and Risk Exposure*, 21 U.C. Davis L. Rev. 1141, 1146 (1988).

3. Kit Barker & Jenny Steele, *Drifting towards Proportionate Liability: Ethics and Pragmatics*, 74 C.L.J. 49, 67 (2015).

4. Restatement (Third) of Torts: Liability for Physical and Emotional Harm §26 cmt. j (2009).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

causal contribution in Section II, I use it in Section III to critically evaluate different legal mechanisms for "limiting" liability for consequences of wrongdoing, including the fraught legal concept of "proximate causation." I challenge the pervasive view that "'proximate cause' is neither about cause nor proximity, as those two words are commonly understood."[5] A proximate cause of an effect, I argue, should be thought of as an event that contributed to a significant degree to a causing of the effect—a degree above some threshold. In Sections IV and V, however, I argue that proximate causation doctrines ought after all to be abandoned in favor of a more fine-grained approach, one that recognizes the possibility of *partial* liability for losses. I ground this approach in a conception of tort law as a system of corrective justice, according to which wrongful contributions to causings of loss trigger corresponding duties to contribute toward repairing the loss. Finally, I use my theory of partial liability to defend a revisionary approach to the "apportionment" of liability between multiple wrongdoers.

II. CAUSAL CONTRIBUTION

It is often natural to compare two events by describing one as *more of a cause* of an effect than the other. A teacher might describe a student's lack of preparation as more of a cause of his poor exam performance than the difficulty of the questions, for example.[6] Similar talk of "degrees of contribution," of "causal potency" or "causal efficacy," and of "chief," "main," or "principal" causes is pervasive in many disciplines, including the natural and social sciences, history, and the law. Yet these kinds of comparisons receive scant attention in the philosophy literature. In earlier work, I try to remedy this by defending a novel metaphysics of causal contribution.[7] This section reviews the fundamental elements of my account before turning to its potential applications to legal liability.

Let us begin with an analogy. Consider the following sentence:

(1) Alice and Bob surrounded the tree.

(1) is ambiguous. Read *distributively*, it follows from (1) that Alice surrounded the tree and Bob also surrounded the tree. But the more natural reading is the *collective* one, according to which Alice and Bob surrounded the tree *together* (by joining hands around the tree, for example). These are distinct states of affairs. On the distributive reading, the tree is surrounded twice; on the collective reading, it is surrounded only once, even though it is surrounded by two people.

Exactly the same is true of (2):

(2) The driver's drunkenness and the rainstorm caused the car crash.

5. *Id.*, §26 cmt. a.
6. *See* H.L.A. HART & TONY HONORÉ, CAUSATION IN THE LAW (2d ed. 1985), at 233.
7. Alex Kaiserman, *Causal Contribution*, 116 PROC. ARISTOTELIAN SOC'Y 387 (2016).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

Read distributively, it follows from (2) that the drunkenness caused the crash and the rainstorm also caused the crash. On the more natural collective reading, however, the drunkenness and the rainstorm caused the crash *together*. These are distinct states of affairs. On the distributive reading, the crash was caused twice over—it was *overdetermined*, to put it another way—whereas on the collective reading the crash was only caused once, even though it was caused by two events. Causation relates pluralities to individuals, in general; and a plurality of events can collectively cause an effect without any one of the plurality individually causing it.

To be *an author* of a book is to be one of a plurality of people who collectively authored it. Similarly, to be *a cause* of an effect is to be one of a plurality of events that collectively caused it. "*X* caused *Y*" and "*X* was a cause of *Y*" are therefore not synonymous, notwithstanding a widespread tendency among philosophers to use them interchangeably. On the collective reading of (2), the rainstorm was *a cause* of the crash but it did not *cause* it—what caused it was the rainstorm and the drunkenness taken together.

Some relations are *scalar*. Take *loving*, for example: I can love someone a lot, and I can love one person more than I love another. But *surrounding* is not a scalar relation. Consider the following sentences, for example:

(3) Alice surrounded the tree a lot.
(4) Alice surrounded the tree more than Bob did.

Statements (3) and (4) sound odd, even ungrammatical.[8] How could Alice have surrounded the tree "a lot"? Either she surrounded it or she did not!

But now consider the following sentences:

(5) Alice contributed a lot to the surrounding of the tree.
(6) Alice contributed more than Bob to the surrounding of the tree.

Statements (5) and (6) are perfectly grammatical; indeed, they would be true if Alice and Bob collectively surrounded the tree but Alice had longer arms and therefore reached further around the tree than Bob. So *surrounding* is all-or-nothing; but that's perfectly consistent with the possibility of different people *contributing* to a surrounding to different degrees.

Michael Moore claims that "[c]ausation is a scalar relation."[9] I think he is simply wrong about this. Consider the following sentences, for example:

(7) The driver's drunkenness caused the crash a lot.
(8) The driver's drunkenness caused the crash more than the rainstorm did.

8. There is perhaps a reading of (3) according to which Alice has surrounded the tree many times; but this clearly does not show that *surrounding* is a scalar relation (compare: it does not follow from the natural reading of "I love you a lot" that I love you many times).

9. Michael S. Moore, Causation and Responsibility: An Essay in Law, Morals and Metaphysics (2009), at 275.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

Statements (7) and (8) sound odd, even ungrammatical. How could the drunkenness have caused the crash "a lot"? Either it caused the crash or it did not!

But now consider the following sentences:

(9) The driver's drunkenness contributed a lot to the causing of the crash.
(10) The driver's drunkenness contributed more to the causing of the crash than the rainstorm did.

Statements (9) and (10) are perfectly grammatical. So *causing* is all-or-nothing; but this is perfectly consistent with the possibility of different causes *contributing* to a causing of an effect to different degrees.[10]

Note that contributing *to a causing* of an effect is not the same as contributing *to the effect*. To contribute causally to an effect is to cause a *part* of that effect. Suppose I have a contract worth $100 with company A and a contract worth $400 with company B. A and B both breach the terms of their contract, leaving me $500 out of pocket. There is a sense in which B's breach contributes more to my total losses than A's breach, because B's breach causes a larger fraction of my total losses than does A's breach. But this is not what is going on in the car-crash case. To say that the driver's drunkenness and the rainstorm collectively caused the crash is *not* to say that the driver's drunkenness caused one part of the crash and the rainstorm caused a different part of the crash. The drunkenness did not cause the crash, nor did it cause a part of the crash; it contributed to a causing of the crash. Consider our surrounding analogy again: I can surround a tree by reaching all the way around it; I can surround *part* of a tree by reaching all the way around one of its branches; and I can *contribute to a surrounding* of the tree by joining hands with another person around the tree. These are all distinct states of affairs—so it is with causation.

These distinctions fit naturally with the familiar idea that causes are *minimally jointly sufficient in the circumstances* for their effects.[11] Here is one way of cashing out this idea. Let $X_1, \ldots, X_n$ and Y be distinct events; let $x_1, \ldots, x_n$, and y be the propositions that $X_1, \ldots, X_n$, and Y, respectively, occurred; let b be the conjunction of all relevant "background conditions";[12] and let

10. Many causal verbs have the same structure. I cannot *author* a book a lot, for example, but I can contribute a lot to the authoring of a book. One way I might do this is by authoring a large part of the book. But I might also have supplied the majority of the ideas or done the bulk of the research; in such a case, I would have contributed a lot to the authoring of a book, even though there is no part of the book that I (individually) authored. I use *surrounding* as opposed to *authoring* as an analogy, primarily because it is plausibly part of the meaning of "author" that a single book cannot be authored more than once, whereas it is generally agreed that an effect can be caused more than once; *but see* Peter Unger, *The Uniqueness in Causation*, 14 AM. PHIL. Q. 177 (1977).

11. *See* J.L. Mackie, *Causes and Conditions*, 2 AM. PHIL. Q. 245 (1965); Richard W. Wright, *Causation in Tort Law*, 73 CALIF. L. REV. 1735 (1985).

12. The "background conditions" are, roughly speaking, the propositions we are "holding fixed" in the context. For example, if an electrical short circuit occurs and a fire breaks out soon after, the short circuit caused the fire only relative to a set of background conditions that includes the fact that there was oxygen in the atmosphere, the fact that there were flammable

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

P(p) be the function that returns the *objective chance* of p.[13] Now consider the following necessary condition on causation:[14]

> MINIMAL SUFFICIENCY: If $X_1, \ldots, X_n$ collectively caused Y relative to b, $P(y \mid x_1 \wedge \ldots \wedge x_n \wedge b) = 1$ and for all proper sub-pluralities $X_i, \ldots, X_j$ of $X_1, \ldots, X_n$, $P(y \mid x_i \wedge \ldots \wedge x_j \wedge b) < 1$.[15,16]

Notice how MINIMAL SUFFICIENCY captures the distributive/collective ambiguity in statement (2) above. If D, R, and C are the events of the drunkenness, the rainstorm, and the car crash, respectively, occurring, and d, r, and c are the corresponding propositions that those events occurred, on its distributive reading (2) implies that $P(c \mid d \wedge b) = 1$ *and* $P(c \mid r \wedge b) = 1$. On its collective reading, however, (2) implies only that $P(c \mid d \wedge r \wedge b) = 1$, whereas $P(c \mid d \wedge b) < 1$ and $P(c \mid r \wedge b) < 1$.

If Alice and Bob collectively surround a tree, but Alice has longer arms, Alice contributes more than Bob to the surrounding of the tree. Intuitively, this is because, although neither Alice nor Bob individually surrounds the tree, Alice comes *closer* to surrounding the tree *by herself* than Bob does. Similarly, although neither the drunkenness nor the rainstorm individually caused the car crash on the collective reading of (2), if $P(c \mid d \wedge b) > P(c \mid r \wedge b)$—that is, if the probability (in the circumstances) of the crash occurring is more conditional on the drunkenness occurring than it is conditional on the rainstorm occurring—then although neither the drunkenness nor the rainstorm individually caused the crash, the drunkenness in some sense

materials nearby, the fact that the world did not disappear before the fire had a chance to develop, and so on. This simple explanation leaves many questions unanswered, of course: Do the background conditions vary with the conversational context? If so, how? And what are the right background conditions to use for the purposes of attributing liability? These are good questions, but I address them elsewhere; *see* Alex Kaiserman, *Necessary Connections in Context*, 82 ERKENNTNIS 45–64 (2017). *See also* note 56 *infra*.

13. By "objective chance," I mean what we normally take ourselves to mean when we say that the chance of a fair coin landing heads up is (slightly less than) 0.5. I do not take this to be a fact about any actual agent's credence function. Nor do I take it to imply indeterminism—the chance of a fair coin landing heads up is 0.5, whether or not the laws of nature are deterministic. Probabilities of this kind are pervasive in science, most notably in statistical mechanics. How exactly they should be understood is controversial, but I do not take a stance on that question here. For one influential perspective, *see* David Lewis, *A Subjectivist's Guide to Objective Chance*, *in* STUDIES IN INDUCTIVE LOGIC AND PROBABILITY (Richard C. Jeffrey ed., 1980).

14. Some philosophers try to turn this principle into an *analysis* of causation by combining it with other necessary conditions; *see, e.g.*, Michael Strevens, *Mackie Remixed*, *in* CAUSATION AND EXPLANATION (J.K. Campbell, M. O'Rourke & H.S. Silverstein eds., 2007). I do not attempt such a project here.

15. MINIMAL SUFFICIENCY does not *quite* capture the idea that causes are minimally jointly sufficient for their effects—if there is an infinite number of propositions, it could be that $P(y \mid x_1 \wedge \ldots \wedge x_n \wedge b) = 1$, even though $X_1, \ldots, X_n$ were not collectively sufficient for Y in the circumstances, because the set of possible worlds in which $X_1, \ldots, X_n$ all occur, b is true, and Y fails to occur might be nonempty but measure zero. (By analogy, the probability of my losing a lottery with an infinite number of tickets is 1, even though there is some possible world in which I win.) I ignore this complication in what follows.

16. I am assuming for the purposes of this paper that the laws of nature are deterministic. There are ways of amending MINIMAL SUFFICIENCY to deal with the alleged possibility of causation in an irreducibly indeterministic world, but I do not consider them here.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

came *closer* to causing the crash by itself than the rainstorm did, because it came closer to being individually sufficient for it. This, I think, is a situation in which it would be appropriate to say that the drunkenness contributed more to the causing of the crash.

Here is a natural way of cashing out this thought. Let $f(X_i, [X_1, \ldots, X_n] \rightarrow Y)^b$ be the function that returns X_i's degree of contribution to the causing of Y by the plurality of events $X_1, \ldots, X_n$, relative to the conjunction of background conditions b. Then:

> CAUSAL CONTRIBUTION: If $X_1, \ldots, X_n$ collectively caused Y relative to b, then $f(X_i, [X_1, \ldots, X_n] \rightarrow Y)^b = \frac{P(y|x_i \wedge b)}{\sum_{j=1}^{n} P(y|x_j \wedge b)}$

In words: An event's degree of contribution to a causing of an effect is equal to the probability of the effect occurring conditional on the cause occurring (and the background conditions obtaining), divided by the sum of the conditional probabilities for all the events involved in that causing. The denominator of this fraction is a renormalizing factor that ensures that degrees of contribution to a causing always sum to 1 (i.e., it follows from CAUSAL CONTRIBUTION that $\sum_{i=1}^{n} f(X_i, [X_1, \ldots, X_n] \rightarrow Y)^b = 1$).[17]

Consider a car crash that was collectively caused (in the circumstances) by the driver's drunkenness and a rainstorm. Which event contributed more to the causing of the crash, according to CAUSAL CONTRIBUTION? Well, that depends. Suppose first that the driver was *really* drunk. Although his drunkenness was not by itself sufficient for the crash, any number of potential distractions would have been enough for him to lose control of his vehicle—a butterfly on the side view mirror, a funny-shaped cloud, and so on. The rainstorm, meanwhile, was fairly mundane; it contributed to the causing of the crash only by impeding the driver's vision because he was too drunk to operate the windscreen wipers.[18] On these facts, $P(c \mid d \wedge b)$ is close to 1: conditional on the driver being in his inebriated state, it was very likely in the circumstances that the crash would have occurred one way or the other. On the other hand, because the rainstorm would have posed no danger to a sober driver, $P(c \mid r \wedge b)$ is not much higher than $P(d \wedge b)$, the unconditional probability in the circumstances of the driver being as drunk

17. Two features of CAUSAL CONTRIBUTION are worth emphasizing. First, the probabilities here are not epistemic probabilities; in particular, $P(y \mid x \wedge b)$ is not the epistemic probability that X caused Y relative to some body of evidence. If X in fact (individually) caused Y, then CAUSAL CONTRIBUTION straightforwardly implies that X's degree of contribution to the causing of Y by X is 1, regardless of how likely it is on our current evidence that X caused Y. Relatedly, CAUSAL CONTRIBUTION is not committed to any analysis of what it is to be a cause of an effect. In particular, it does not imply that X is a cause of Y if (or only if) X raises the probability of Y; i.e., if $P(y \mid x \wedge b) > P(y \mid \neg x \wedge b)$. CAUSAL CONTRIBUTION simply provides a way of determining, given that X is a cause of Y, X's degree of contribution to the causings of Y to which it contributes. If X is not a cause of Y, then X did not contribute to any causing of Y, and so its degree of contribution to every causing of Y is undefined by CAUSAL CONTRIBUTION, regardless of the value of $P(y \mid x \wedge b)$.

18. My thanks to Helen Beebee for this example.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

as he was. Suppose for the sake of argument that $P(c \mid d \wedge b) = 0.9$ and $P(c \mid r \wedge b) = 0.2$; then it follows from CAUSAL CONTRIBUTION that $f(R, [R, D] \rightarrow C)^b \approx 0.82$ and $f(D, [R, D] \rightarrow C)^b \approx 0.18$.

Alternatively, suppose that the rainstorm was incredibly severe, so that any number of slight lapses in concentration would have been enough for the driver to lose control of the vehicle. The driver, meanwhile, was only slightly drunk; his drunkenness contributed to the causing of the crash only by reducing his reaction time by a few milliseconds. On *these* facts, $P(c \mid r \wedge b)$ is close to 1: conditional on the rainstorm occurring, it was very likely that the crash would have occurred one way or the other. On the other hand, because the drunkenness would have posed no danger to the driver in normal weather conditions, $P(c \mid d \wedge b)$ is not much higher than $P(r \wedge b)$, the unconditional probability in the circumstances of the rainstorm occurring. If the rainstorm was particularly unlikely in the circumstances—a freak occurrence, say—then CAUSAL CONTRIBUTION implies that the driver's drunkenness contributed only a negligible amount to the causing of the crash.[19]

In this section, I argue that causation, though not a scalar relation, is a relation to which multiple events can contribute to different degrees. I also motivate a probabilistic measure of an event's degree of contribution to a causing of an effect. It is now time to put these concepts to theoretical work.

III. A CAUSAL THEORY OF "PROXIMATE CAUSATION"

What is tort law? According to the corrective-justice theory, tort law is a mechanism for rectifying or correcting injustices inflicted by one person on another. The theory received its classic formulation in Aristotle's *Nicomachean Ethics* and forms the basis of many modern theories of tort.[20] Agents, on this view, bear certain first-order duties toward other agents, who,

19. Like most probabilistic analyses of causal concepts, CAUSAL CONTRIBUTION goes awry in cases involving so-called "spurious correlations." Suppose, for example, that conditional on the drunkenness occurring, the crash is fairly likely to occur not *because* of the drunkenness but rather because the driver tends to drink more in winter, so that if he is drunk, it is probably winter, and if it is winter, the road is probably icy, and icy roads lead to increased risks of accidents. As stated, CAUSAL CONTRIBUTION would assign a higher degree of contribution to the drunkenness in virtue of this "spurious" correlation between the driver's drunkenness and the risk of the crash. There are a number of ways of addressing this problem, however. One is to replace conditional probabilities, $P(y \mid x \wedge b)$, with interventionist conditional probabilities, $P(y \mid do(X, Y) \wedge b)$, where $do(X, Y)$ represents the event of "lifting X from the influence of the old functional mechanism and placing it under the influence of a new mechanism . . . while keeping all other mechanisms [leading to Y] undisturbed." JUDEA PEARL, CAUSALITY: MODELS, REASONING, AND INFERENCE (2000), at 70. *See also* JAMES WOODWARD, MAKING THINGS HAPPEN: A THEORY OF CAUSAL EXPLANATION (2003); Luke Fenton-Glynn, *A Proposed Probabilistic Extension of the Halpern and Pearl Definition of "Actual Cause,"* axv056 BRIT. J. PHIL. SCI. (2016) [doi:10.1093/bjps/axv056]. I set these issues aside for the purposes of this paper.

20. *See, e.g.*, JULES L. COLEMAN, RISKS AND WRONGS (1992); ARTHUR RIPSTEIN, EQUALITY, RESPONSIBILITY AND THE LAW (1998); ERNEST J. WEINRIB, THE IDEA OF PRIVATE LAW (1995).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

correlatively, have certain rights against those duties being breached. If D breaches a first-order duty she bears toward C, C has thereby been *wronged* by D. This triggers a second-order duty on the part of D, a duty to *correct* or *make right* that wrong.[21] The point of tort law, according to the corrective-justice theory, is to provide a mechanism for enforcing these second-order duties.

The corrective-justice theory is consistent with many possible views about the contents of these duties. But given the resources developed above, the standard view can be expressed as follows:

> WRONGFUL CONTRIBUTION: For all legal persons D and C:
>
> D bears a first-order duty toward C not to contribute wrongfully to a causing of a loss to C, and
>
> if D breaches her first-order duty toward C, D acquires a second-order duty to restore C to the state she would have been in, but for the loss.

Proponents of WRONGFUL CONTRIBUTION disagree both on what constitutes a *loss*[22] and on what it is to contribute *wrongfully* to a causing of a loss. But the basic idea is easy to illustrate. If D recklessly runs a red light at a road junction and collides with C, injuring her, D has thereby breached his first-order duty toward C not to contribute wrongfully to a causing of a loss to her. This triggers a second-order duty on the part of D to restore C to the state she would have been in but for the loss—D is said to be *liable* for C's loss in such a case. Because D cannot magically cure C of her injury, he would normally be expected to discharge his liability through the paying of monetary damages to C to compensate her for medical costs, lost earnings, pain and suffering, and so on.[23]

21. For one account of the mechanism by which breaches of first-order duties trigger second-order duties, *see* John Gardner, *What Is Tort Law For? Part 1: The Place of Corrective Justice*, 30 LAW & PHIL. 1 (2011).

22. To accord with actual practice, the category of "loss" should at least include physical changes in a person's body or property, reduction or nonreceipt of financial assets, loss of freedom, mental suffering, and maybe even the loss of a valuable chance; *see* SANDY STEEL, PROOF OF CAUSATION IN TORT LAW (2015), at 292–235; or interference with exclusive possession (*c.f.* the English tort of trespass).

23. WRONGFUL CONTRIBUTION is controversial, both as a descriptive account of what tort law *is* and as a normative account of tort law *ought* to be. Some theorists argue that at least in some cases defendants should be held liable for losses arising from all harms caused by their actions, regardless of whether they were caused wrongfully; *see, e.g.*, Richard A. Epstein, *A Theory of Strict Liability*, 2 J. LEGAL STUD. 151 (1973). Others argue that there are cases in which a defendant should be held liable for a claimant's loss even in the absence of evidence that the defendant's actions contributed to a causing of the loss; *see, e.g.*, Alan Strudler, *Mass Torts and Moral Principles*, 11 LAW & PHIL. 297 (1992). It is argued, on these and other grounds, that the best way to understand tort law is not in conceptual, deontological terms but rather in instrumentalist, utilitarian terms; *see, e.g.*, ROBERT S. SUMMERS, INSTRUMENTALISM AND AMERICAN LEGAL THEORY (1982); Richard A. Posner & William M. Landes, *The Positive Economic Theory of Tort Law*, 15 GA. L. REV. 851 (1980). I largely steer clear of these debates in what follows, though much of what I have to say is compatible with different positions within them.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

On the face of it, however, WRONGFUL CONTRIBUTION faces an important difficulty: it massively overgenerates second-order duties. Consider the classic *Palsgraf v. Long Island Railroad Co.*,[24] wherein an employee of the defendant company negligently helped a man board a moving train. The man dropped a package which, unbeknownst to the train guard, contained fireworks. The package fell under the wheels of the train and exploded, sending shockwaves down the platform, and this tipped over a set of scales onto one Mrs. Palsgraf, injuring her. The employee's action was a cause of Palsgraf's injury. Moreover, that action was wrongful—in helping the man board the moving train, the employee failed to exercise the kind of care that might reasonably be expected of him. By WRONGFUL CONTRIBUTION, then, it seems that the train company (as the guard's employer) should be liable for Palsgraf's injury. Yet it is not at all clear that this is the right result—intuitively, the injury seems in some sense *too removed* from the initial wrongdoing for a finding of liability to be appropriate. Call this the *overgeneration problem.*

Chief Justice Cardozo's celebrated solution to this problem, formulated in his majority opinion in *Palsgraf*, was to insist on a *relational* account of wrongfulness. An action is not wrongful *simpliciter*, he argued, but only *relative* to an outcome: "Negligence in the air, so to speak, will not do," to quote Sir Frederick Pollock's well-known maxim.[25] To contribute wrongfully to a causing of a loss, one must perform an action that was wrongful *relative to that loss*; and although the action of the train guard was wrongful relative to any harms the holder of the package may have suffered, Cardozo argued that it was not wrongful relative to Palsgraf's injury, and hence the train guard did not breach his duty to Palsgraf not to contribute wrongfully to a causing of harm to her. "The conduct of the defendant's guard, if a wrong in its relation to the holder of the package, was not a wrong in its relation to the plaintiff, standing far away. Relatively to her it was not negligence at all."[26]

What is it for an action to be wrongful *relative* to a particular loss? Some theorists appeal to the concept of *reasonable foreseeability*:[27]

> REASONABLE FORESEEABILITY: S's φ-ing at t was wrongful relative to a loss L if and only if L was reasonably foreseeable by S at t.

Arguably, however, REASONABLE FORESEEABILITY is both too weak and too strong. To see why it is too weak, suppose D acts in such a way that foreseeably causes a small loss to C, but only to avoid a much larger loss to herself. It

24. Palsgraf v. Long Island R.R. Co., 248 N.Y. 339 (1928).
25. FREDERICK POLLOCK, THE LAW OF TORTS (11th ed. 1920), at 455.
26. *Palsgraf*, *supra* note 24, at 341.
27. "[A] defendant is responsible for and only for such harm as he could reasonably have foreseen." HART & HONORÉ, *supra* note 6, at 255. "[I]t would be wrong that a man should be held liable for damage unpredictable by a reasonable man . . . [t]hus foreseeability becomes the effective test." Overseas Tankship (UK) Ltd. v. Morts Dock & Eng'g Co. Ltd. (The Wagon Mound) (No. 1), [1961] AC 388, 426 (JCPC).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

follows from REASONABLE FORESEEABILITY that D acts wrongfully relative to (and hence should be held liable for) C's loss; and at least some argue that this is the wrong result.[28]

On the other hand, suppose D shoots blindly into a crowd of people. It was reasonably foreseeable by D that *a* death would result from her actions; but if a death in fact results, that *particular* death was not reasonably foreseeable by D at the time she shot her weapon, assuming she had no way of knowing which person in the crowd her bullet would strike. Foreseeing a harm is not the same as foreseeing that a harm of a certain kind will occur.[29] Presumably, however, there would be no hesitation in this case in holding D liable for the death that in fact results. When a defendant "ought to have foreseen in a general way consequences *of a certain kind*, it will not avail him to say that he could not foresee the precise course or the full extent of the consequences, being of that kind, which in fact have happened."[30]

In light of these challenges, some theorists advocate a more sophisticated definition of relational wrongfulness:

> HARM-WITHIN-THE-RISK: S's φ-ing at t was wrongful relative to a loss L if and only if S's φ-ing created an unjustified risk of a loss of type $\mathbf{L}$ occurring, of which L was an instance.

According to HARM-WITHIN-THE-RISK, D may be excused from liability for a foreseeable loss so long as the risks her action created were justified. But on the other hand, D can be held liable for an unforeseeable loss, according to HARM-WITHIN-THE-RISK, so long as her actions created an unjustified risk of a harm of some type occurring of which the loss was an instance—the loss need only be "within the risk that made [the defendant's] action negligent."[31]

Hurd and Moore identify a number of "quite damning conceptual challenges"[32] for HARM-WITHIN-THE-RISK, which they take to be "good grounds to suspect that [it] cannot be coherently defended."[33] But even setting aside their concerns, there is reason to think that HARM-WITHIN-THE-RISK cannot by itself solve the overgeneration problem. Consider the following case:

> **Fire**: D negligently drops a lighted cigarette. The cigarette starts a fire that damages C's car. C takes her car to the local garage to be repaired. Unfortu-

28. *See* United States v. Carroll Towing Co., 159 F.2d 169 (2d Cir. 1947), in which the wrongfulness of the defendant's act was famously held to be a function of "the burden of adequate precautions"; *id.* at 173.

29. Compare with the distinction between *seeing that a table exists* and *seeing a table*; I can see that a table exists without seeing a table (I might read a newspaper article about tables, for example), and I can see a table without seeing that a table exists (I might lack the concept of a table). *See* FRED DRETSKE, SEEING AND KNOWING (1969).

30. Frederick Pollock, *Liability for Consequences*, 38 L.Q.R. 165, 167 (1922).

31. Petitions of the Kinsman Transit Co., 338 F.2d 708, 720 (2d Cir. 1964).

32. Heidi M. Hurd & Michael S. Moore, *Negligence in the Air*, 3 THEORETICAL INQUIRIES IN L. 333, 355 (2002).

33. *Id.* at 381.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

nately, the garage is struck by lightning overnight, causing a fire that further damages C's car.

C suffers two separate losses in **Fire**—call them L_1 and L_2—*neither* of which would have occurred but for D's negligent act (since had the first fire not occurred, C's car would not have been in the garage when the lightning struck). Nevertheless, I take it that D should only be held liable for L_1, and not L_2—in the relevant sense, L_2 is "too removed" from D's initial wrongdoing for it to be reasonable to hold him liable for it. The problem is that it is not at all obvious how HARM-WITHIN-THE-RISK can explain this, because both losses are of exactly the same type; if D is liable for L_1 in virtue of the fact that his dropping the cigarette created an unreasonable risk of fire damage to C's car occurring, HARM-WITHIN-THE-RISK does not preclude holding D liable for L_2 as well, *for the very same reason.* The problem is that HARM-WITHIN-THE-RISK "only asks after a logical relation between a type of harm (the one the risk of which made the defendant negligent) and a token of harm (the harm that actually happened)," and this logical relation "takes no notice" of the "freakishness" of the "causal route."[34]

In practice, the law deals with these kinds of cases by invoking the concepts of "proximate causation" or "remoteness."[35] In **Fire**, for example, the idea is that D is liable for L_1 but not L_2 in virtue of the fact that although his dropping the cigarette was a "factual cause" of both losses, it was a "proximate cause" of L_1 but not of L_2. This concept of proximate causation has been widely criticized, however.[36] The current consensus seems to be that "'proximate cause' is neither about cause nor proximity, as those two words are commonly understood."[37] It cannot be about *spatiotemporal* proximity, because defendants are often rightly held liable for losses greatly removed both in space and time from their wrongdoing.[38] And it cannot be about *causation* either, the thought continues, because "[a] necessary condition

34. *Id.* at 405.

35. "[A] man is liable only for the . . . proximate consequence of his actions, and not for remote consequences." Ward v. Weeks, (1830) 7 Bing. 211, 212 (1830). The principle is often traced back to Bacon's Maxims: "*In jure non remota causa sed proxima spectator.* It were infinite for the law to judge the causes of causes, and their impulsions one of another; therefore it contenteth itselfe with the immediate cause, and judgeth of acts by that, without looking to any further degree." FRANCIS BACON, *Maxims of the Law, in* 14 THE WORKS OF FRANCIS BACON 189 (James Spedding et al. eds., 1819).

36. *See* LEON GREEN, RATIONALE OF PROXIMATE CAUSE (1927); HART & HONORÉ, *supra* note 6; Joseph H. Beale, *The Proximate Consequences of an Act*, 33 HARV. L. REV. 633 (1920); Henry W. Edgarton, *Legal Cause*, 72 U. PA. L. REV. 343 (1924); Fleming James & Roger F. Perry, *Legal Cause*, 60 YALE L.J. 761 (1951); Wex S. Malone, *Ruminations on Cause-in-Fact*, 9 STAN. L. REV. 60 (1956); Jane Stapleton, *Legal Cause: Cause-in-Fact and the Scope of Liability for Consequences*, 54 VAND. L. REV. 941 (2001); Wright, *supra* note 11.

37. RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM §26 cmt. a (2009).

38. In People v. Botkin, 132 Cal. 231 (1901), for example, the defendant sent a box of poisoned candy from San Francisco to Dover, in Delaware. The victim ate the candy and died. Whether the defendant is liable for the claimant's losses in this case clearly has nothing to do with the distance between San Francisco and Delaware or the time it took for the candy to arrive.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

for a relevant harm is a factual cause of that harm, without limitation" and "there are no degrees of factual cause."[39] Once it has been established that the defendant's wrongdoing was a cause of the claimant's harm, it is generally assumed that any further questions could not possibly belong to any genuine causal inquiry.

But this assumption is mistaken. As I argue in Section II, once we have established that the defendant's wrongdoing was a cause of the claimant's harm, there is always a further question: that of the *degree* of contribution the wrongdoing made to the causing of the harm. This suggests the following, causal theory of "proximate causation": a "proximate cause" of an effect is an event that contributed to a *significant degree* to a causing of the effect—a degree above some threshold.[40] In other words, I propose to interpret tort law's "proximate causation" requirement as expressing a commitment to the following characterization of the duties of corrective justice:

> THRESHOLD: Where D and C are legal persons:
>
> D bears a first-order duty toward C not to contribute wrongfully *to a significant degree* to a causing of a loss to C; and
>
> if D breaches his first-order duty toward C, D acquires a second-order duty to restore C to the state she would have been in but for the loss.

What counts as a "significant degree" of contribution is a vague matter, of course, but an element of vagueness in the law should come as no surprise. Judges may well draw the line in different places in different contexts. But the basic idea is that the law's reluctance to impose liability for losses that are "too remote" should be understood as amounting to a reluctance to impose liability on defendants whose actions made only small contributions to causings of loss.

THRESHOLD, together with CAUSAL CONTRIBUTION, can explain the intuition in **Fire**. L_2, let us suppose, was collectively caused (in the circumstances) by D's negligence and the lightning strike on the garage. The important fact here is that conditional on D dropping the cigarette, the probability of L_2 occurring was vanishingly small—something really unlikely had to happen in order for the car to be damaged by fire a second time, even given D's negligent behavior. Conditional on the lightning strike occurring, by contrast, the probability of L_2 occurring was nonnegligible—even if D had not dropped his cigarette, there are many other reasons C

39. RESTATEMENT (THIRD) OF TORTS, *supra* note 37, §26 cmt. a.

40. Moore defends a similar view: "[T]he amount of causal contribution needed for an actor to be morally responsible for some harm is non-*de minimis* (or 'substantial')"; MOORE, *supra* note 9, at 276. Unfortunately, however, Moore does not explain what "causal contribution" is, except to say that it "peters out over time, much as the ripples from a stone dropped in a pond diminish as they travel outward," a metaphor that suggests a defendant should not be held liable for losses that occur a long time after the wrongdoing, which, as argued above (and as Moore himself accepts), gets the wrong result in some cases. *Id. See also* Helen Beebee, *Legal Responsibility and Scalar Causation*, 4 JURISPRUDENCE 102 (2013).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

might have felt the need to take the car to the garage that day. Hence it follows from CAUSAL CONTRIBUTION that D's dropping the cigarette made only a negligible contribution to the causing of the second loss—and *that* is why D should not be held liable for it, according to THRESHOLD.

I think that THRESHOLD can make sense of many of the ways lawyers actually talk about "proximate causation." In his dissent in *Palsgraf*, for example, Justice Andrews lists "some hints that may help us" in determining whether one event was a "proximate cause" of another: "Was the one a substantial factor in producing the other? Was there a direct connection between them, without too many intervening causes? Is the effect of cause on result not too attentuated [sic]? Is the cause likely, in the usual judgment of mankind, to produce the result?"[41] Talk of "substantial factors,"[42] "material contributions,"[43] or events that "overwhelm"[44] or "eclipse"[45] other causes, commonly found in judicial discussions of causation, can be naturally interpreted as referring to causes that contributed to a significant degree to a causing of the effect. It also makes sense to ask how many other events were involved in the causing of the effect, because it follows from CAUSAL CONTRIBUTION that the degree of contribution of an event to a causing of an effect decreases as the number of other causes increases, all other things being equal.[46] And it straightforwardly follows from CAUSAL CONTRIBUTION that talk of the "likelihood" of the effect occurring given that the cause occurred, together with other "[j]udicial expressions such as 'abnormal' and 'coincidental' on the one hand and 'in the ordinary course of things' and 'natural and probable consequence' on the other,"[47] can be a decent guide to whether the event made a significant contribution to the causing of the effect.

Admittedly, the language of "proximate causation" is used in a variety of different ways for different purposes in the law. At times it may well be used to express what would more accurately be described as a mismatch between the type of harm risked and type of harm caused, or even as an attempt to mask underlying disputes over questions of legal policy.[48] But in this section I am arguing that there is a legally indispensable concept of "proximate causation," properly analyzable *in causal terms*, which reflects the law's reluctance to impose liability on defendants who make only small contributions to causings of loss.

41. *Palsgraf*, *supra* note 24, at 354.
42. *See* Jerimiah Smith, *Legal Cause in Actions of Tort*, 25 HARV. L. REV. 103 (1911).
43. This terminology appears to have originated in Duke of Buccleuch v. Cowan, (1866) 5 M. 214. *See* Sandy Steel & David Ibbetson, *More Grief on Uncertain Causation in Tort*, 70 C.L.J. 451 (2011).
44. *See* Mitchell v. Rahman, [2002] MBCA 19 para. 31 (Can. Man.).
45. *See* Emeh v. Kensington & Chelsea Westminster Area Health Auth., [1984] 3 All E.R. 1044, 1049 (CA).
46. *See also* Michael S. Moore, *Author's Reply*, 4 JURISPRUDENCE 121 (2013).
47. DOUGLAS HODGSON, THE LAW OF INTERVENING CAUSATION (2016), at 91.
48. "[P]roximate cause is little more than a swirling maelstrom of policy, practicality, and case-specific fairness considerations—rather than a meaningful set of rules or even principles." David G. Owen, *The Five Elements of Negligence*, 35 HOFSTRA L. REV. 1671, 1682 (2007).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

IV. AGAINST ALL-OR-NOTHING LIABILITY

THRESHOLD, just like WRONGFUL CONTRIBUTION, implies that liability is all-or-nothing. A defendant either breached a duty to the claimant not to contribute wrongfully to a significant degree to a causing of a loss to him, or she did not. If she did, she is bound by a second-order duty to restore the claimant to the state he would have been in but for the loss, and so is fully liable for the loss; if she did not, she bears no second-order duty to the claimant at all. In this section, however, I argue that this all-or-nothing approach should in fact be abandoned in favor of a more fine-grained approach, one that recognizes the possibility of *partial* liability for losses.

Start by considering the following case:

> **Contributory Negligence**: Big Corp negligently fails to replace its outdated equipment. The equipment short-circuits. At around the same time, Greta negligently drops a lighted cigarette nearby. Both events start small fires which, if either had occurred alone, would eventually have fizzled out without causing much damage. Unfortunately, however, the two fires join together into one big fire, which burns down Greta's house.

According to THRESHOLD, Big Corp in **Contributory Negligence** is either fully liable or not at all liable for Greta's loss, depending on whether Big Corp's negligence made a significant contribution to the causing of the damage. But neither of these options seems like the right result. Requiring Big Corp to absorb *all* of Greta's losses seems too harsh, because, after all, the damage would not have occurred but for Greta's own negligence. But excusing Big Corp from *all* liability seems too lenient, because, after all, the damage would not have occurred but for Big Corp's negligence.

A number of legislative overhauls have sought to allow for more flexibility in such cases. The paradigm example is the British Law Reform (Contributory Negligence) Act 1945, which states that:

> Where any person suffers damage as the result partly of his own fault and partly of the fault of any other person or persons . . . the damages recoverable in respect thereof shall be reduced to such extent as the court thinks just and equitable having regard to the claimant's share in the responsibility for the damage.[49]

The act allows a court to reduce the damages owed to the claimant, in principle by any fraction of the claimant's total losses, so as to reflect the claimant's own "share in the responsibility" for the harm caused.[50] But although this mechanism might achieve the intuitively correct result, it is difficult to make sense of it in terms of THRESHOLD. After all, if Big Corp has

49. Law Reform (Contributory Negligence) Act, 1945, 8 & 9 Geo. 6, c. 28, §1, sch. 1 (Eng.).

50. Similar reforms have since been introduced in the majority of Anglo-American jurisdictions. In the United States, so-called "comparative negligence" rules have been gradually introduced by statute; *see* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY (2000).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

indeed committed a wrong that can only be corrected by restoring Greta to the state she would have been in but for the damage to her house, corrective justice presumably requires us to hold Big Corp liable for 100 percent of Greta's losses, *regardless* of Greta's own actions.

Now consider a slightly different case:

> **Joint Negligence**: Big Corp and Little Corp both negligently fail to replace their outdated equipment. Both sets of equipment short-circuit. Both events start small fires which, if either had occurred alone, would eventually have fizzled out without causing much damage. Unfortunately, however, the two fires join together into one big fire, which burns down Greta's house.

As before, Big Corp and Little Corp in **Joint Negligence** are both fully liable for Greta's losses, according to THRESHOLD, so long as their actions each made a significant contribution to the causing of the damage. Hence Greta can choose to sue either Big Corp or Little Corp for 100 percent of her losses. But again, neither option seems like the right result. Because Big Corp and Little Corp both contributed to the causing of the damage, we would presumably want the costs to be shared between them.

In practice, the law gets around *this* problem by allowing whichever company Greta chooses to sue to then bring a *separate* claim against the other company for a contribution toward the damages paid, allegedly on grounds of "fairness" or "unjust enrichment."[51] But again, it is hard to make sense of this practice in corrective-justice terms. If Greta decides to sue Big Corp, it is not clear what grounds Big Corp could possibly have to bring a claim against Little Corp—after all, Big Corp has not been *wronged* by Little Corp just because Greta chose to sue the former over the latter, and so there is no wrong that such a claim could be interpreted as correcting.[52]

A conclusion one could draw from all this is that tort law is not, after all, purely concerned with corrective justice. John Gardner, for example,

51. *See* UNIFICATION OF TORT LAW: MULTIPLE TORTFEASORS (W.V.H. Rogers ed., 2004).

52. Some jurisdictions have adopted systems of so-called "proportionate liability" in cases with multiple wrongdoers, according to which "the liability of a defendant . . . is limited to an amount reflecting that proportion of the damage or loss claimed that the court considers just having regard to the extent of the defendant's responsibility for the damage or loss." *Civil Liability Act 2002* (NSW) s 35 sch 1 pt a (Austl.). The power of a court to reduce the damages owed to the claimant to reflect a particular individual's "share of responsibility" for the loss is thus extended by these reforms to any case involving multiple wrongdoers, regardless of whether one of them is the claimant herself. The clearest examples are the Australian jurisdictions, although most American states have also introduced a version of proportionate liability for some kinds of harm, retaining traditional "joint and several liability" for others; *see* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY, *supra* note 50. These reforms have been controversial, however, and many scholars remain firmly opposed to them; *see, e.g.*, Barker & Steele, *supra* note 3, at 67; Wright, *supra* note 2; William J. McNichols, *Judicial Elimination of Joint and Several Liability because of Comparative Negligence: A Puzzling Choice*, 32 OKLA. L. REV. 1 (1979). Note that what I mean by "proportionate liability" here is very different from what might be called "probabilistic liability," where liability is apportioned according to the *epistemic* probability that each defendant's actions was a cause of the claimant's harm; *see* STEEL, *supra* note 22, ch. 6. My view has nothing to say about how to proceed in cases where the causal facts are uncertain.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

claims that these apportionment-of-liability mechanisms "lack a corrective-justice rationale," because "[c]orrective justice . . . knows only addition and subtraction," and hence "has no room for division, which is the business of distributive justice."[53] Given my arguments in Section II, however, this argument is unsound. The problem is not that corrective justice cannot explain the outcomes in these cases—the problem is that THRESHOLD is not the correct characterization of the duties of corrective justice. Once we realize that contributions to causings come in degrees, we should *also* think of liability as coming in degrees. In other words, THRESHOLD should be replaced with the following principle:

> PROPORTIONALITY: Where D and C are legal persons:
>
> D bears a first-order duty toward C not to contribute wrongfully (to *any* degree) to a causing of a loss to C, and
>
> if D breaches his first-order duty toward C by wrongfully contributing *to degree x* to a causing of a loss to C, D acquires a second-order duty to *contribute to degree x toward restoring* C to the state she would have been in but for the loss.

PROPORTIONALITY is, I hope, fairly intuitive on its face. It encodes a natural relationship between the contribution a defendant's wrongdoing makes to the causing of a loss and the contribution she is thereby required to make toward repairing it. Defendants, according to PROPORTIONALITY, should be held liable for claimants' losses only to the extent to which their wrongdoing contributed to bringing those losses about.[54] THRESHOLD, by contrast, can be thought of as a *coarse-grained* version of PROPORTIONALITY, one that follows from imposing on PROPORTIONALITY the unmotivated constraint that liability must be all-or-nothing. Whereas according to THRESHOLD, a defendant's degree of liability effectively jumps down from 100 percent to 0 percent as the degree of contribution of her wrongdoing to the causing of the loss passes the threshold, PROPORTIONALITY allows for degrees of liability gradually to decrease as a function of the wrongdoing's degree of contribution to the causing of the loss.

Suppose, for example, that Big Corp contributes to the causing of Greta's loss to degree 0.4 in **Joint Negligence** (so that Little Corp contributes to degree 0.6, because degrees of contribution to causings always sum to 1). Then Big Corp, according to PROPORTIONALITY, acquires a second-order duty to contribute to degree 0.4 toward restoring Greta to the state she would have been in but for the damage to her house. I say that Big Corp is "liable to degree 0.4," or "40 percent liable," for Greta's loss in such a case. Plausibly, Big Corp can discharge its 40 percent liability by paying monetary

53. John Gardner, *What Is Tort Law For? Part 2. The Place of Distributive Justice*, *in* PHILOSOPHICAL FOUNDATIONS OF TORT LAW 349 (John Oberdiek ed., 2014).

54. Interestingly, a number of authors defend similar principles for moral responsibility; *see* Sara Bernstein, *Causal Proportions and Moral Responsibility*, *in* 4 OXFORD STUDIES IN AGENCY AND RESPONSIBILITY (David Shoemaker ed., 2017); Carolina Sartorio, *A New Form of Moral Luck?*, *in* AGENCY, FREEDOM AND MORAL RESPONSIBILITY (Andrei Buckareff et al. eds., 2015).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

damages to Greta equal to 40 percent of her losses.[55] Thus, if Greta were to successfully sue both Big Corp and Little Corp, she would recover 100 percent of her losses, 40 percent from one and 60 percent from the other.

Some might object at this point that PROPORTIONALITY, at least compared to THRESHOLD, seems strongly weighted in favor of defendants.[56] Suppose Little Corp in **Joint Negligence** has no liability insurance and no assets, or it is currently insolvent, or it no longer exists, or for some other reason it is not able to discharge its second-order duty to Greta. Under THRESHOLD, Greta can still recover 100 percent of her losses from Big Corp. But under PROPORTIONALITY, Greta can sue Big Corp for only 40 percent of her losses and must absorb the remaining 60 percent herself. This seems unfair; after all, Big Corp is a large, multinational corporation with a poor safety record for which 60 percent of Greta's losses is mere small change, whereas Greta is an innocent victim who has lost everything she owns in a fire she neither caused nor could have prevented. It feels morally unacceptable to ask Greta to absorb even a fraction of her losses, given that they could so easily be absorbed by Big Corp (or, more likely, by Big Corp's liability insurance provider).

I agree that there is something unjust about Greta having to absorb 60 percent of her losses in **Joint Negligence**. But this is a distributive injustice, not a corrective one. To illustrate, consider the following case:

> **Noncausal Negligence**: Big Corp fails to replace its outdated equipment. Luckily, the equipment does not short-circuit. Unfortunately, however, lightning strikes a tree nearby, starting a fire that burns down Greta's house.

Both PROPORTIONALITY and THRESHOLD imply that Greta cannot recover her losses from Big Corp in this case, for the simple reason that Big Corp's negligence played no role in bringing about the damage. From a distributive perspective, it might seem unfair that Greta must absorb losses for which she is not responsible when they could so easily be absorbed by less deserving individuals, Big Corp included. But the duty to compensate Greta in **Noncausal Negligence**, if there is one at all, falls not to Big Corp but to the state or, failing that, Greta's community at large. If Greta is owed compensation in **Noncausal Negligence**, it is not because she has been wronged, but because one has a duty to distribute (and redistribute) resources in such a way as to alleviate the suffering of those harmed through no fault of their own. The fact that Greta's loss can be alleviated at such a small cost to Big Corp is, of course, not irrelevant to the question of how to meet the demands

55. Note, however, that being 40 percent liable for a claimant's losses is not the same as being liable for 40 percent of her losses. D is *liable for 40 percent* of C's losses just in case D's wrongful conduct (individually) caused a harm to which 40 percent of C's total losses are directly attributable; D is *40 percent liable* for C's losses just in case D's wrongful conduct contributed to degree 0.4 to a causing of a harm to which 100 percent of C's total losses are directly attributable. These are different second-order duties, even if they can be discharged in the same way.

56. *See* Barker & Steele, *supra* note 3; Wright, *supra* note 2; McNichols, *supra* note 52.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

of distributive justice in this case. But it is of no relevance to the demands of corrective justice; and because tort law is a system of corrective justice, it should not be part of the remit of tort law to provide compensation to Greta in **Noncausal Negligence**, no matter how deserving she might be.

My claim is that exactly the same considerations apply to **Joint Negligence**. Big Corp in this case has wrongfully contributed to a causing of the damage to Greta's house to degree 0.4. I am arguing that this is a wrong for which contributing to degree 0.4 toward compensating Greta for her losses is the required remedy. Once Big Corp has discharged this duty, the demands of corrective justice have been met. How Greta ought to be compensated for the remainder of her losses, if at all, is an important question, but it is a question of distributive justice, not corrective justice, and hence not a question to which tort law need provide an answer.

Accepted in full generality, PROPORTIONALITY admittedly has some fairly revisionary consequences for tort law as actually practiced, and not just in cases of insolvency. Suppose C's loss was collectively caused (in the circumstances) by D's negligence and a *natural* event, such as a lightning strike (as in **Fire**, above). According to THRESHOLD, D is either 100 percent liable or not at all liable for C's loss, depending on whether the degree of contribution of D's negligence to the causing of the loss is above or below the threshold (i.e., whether D's negligence can be considered a "proximate cause" of the loss). But PROPORTIONALITY allows for D's degree of liability to vary smoothly as a function of his degree of contribution. If his negligence contributed to degree 0.6 to the causing of C's loss, for example, PROPORTIONALITY would hold him 60 percent liable for it. Because the other cause was a natural event, C in this case would recover only 60 percent of her losses once all wrongs had been corrected. How C ought to be compensated for the remainder of her losses is an important question, but it is a question of distributive justice, not corrective justice, and hence not a question to which tort law need provide an answer.[57]

Some might insist that even if it is fundamentally a system of corrective justice, tort law can still legitimately be used to pursue distributive goals, perhaps in order to pick up some of the slack created by the state's failure to address them.[58] But the danger with this approach is that we end up with a tort system that cannot be justified on either corrective or distributive

57. This case highlights the importance of choosing the right background conditions when evaluating causal claims. If we include all facts about the weather as part of the background conditions, D's negligence (individually) caused C's loss, and so D is fully liable for the loss. If we do not hold fixed the facts about the weather, however, C's loss was collectively caused by D's negligence and the lightning strike, and so D is only partially liable for the loss. The process of determining a defendant's degree of liability therefore consists of two stages: first we must determine the appropriate background conditions; then we must determine the degree of contribution the defendant's wrongdoing made to the causing of the loss, relative to those background conditions. I have very little to say in this paper on the first stage of this process; *but see* Kaiserman, *supra* note 12, for more a more detailed discussion of the issues that arise.

58. Coleman consistently argues that "tort law is best explained by corrective justice"; COLEMAN, *supra* note 20, at 9; but even he concedes that there are "other goals the state may

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

grounds. Suppose we hold Big Corp 100 percent liable for the damage to Greta's house in **Joint Negligence**; 40 percent of this liability can be justified on corrective grounds, on my view, so the other 60 percent must be justified on distributive grounds. We might appeal to the fact that Greta is deserving and poor, whereas Big Corp is undeserving and rich, for example. But there are many deserving poor people besides Greta—why should Big Corp pay extra money to Greta rather than these other people? There are also many undeserving rich people (and many more undeserving rich corporations)—why should Big Corp, rather than these other individuals, cover the remainder of Greta's losses? It is no use pointing to the causal connection between Big Corp's negligence and Greta's loss, because this fact is, at least on the face of it, simply irrelevant to the concerns of distributive justice.

For these and other reasons, I think that normative coherence in tort law can be achieved only by using it purely to pursue the demands of corrective justice, and this means replacing THRESHOLD with PROPORTIONALITY across the board. Holding everything else fixed, such a change would probably increase the level of distributive injustice in the world, because it would decrease the amount of compensation available to innocent victims through the tort system. Personally, I think this is more a reason for the state to face up to its distributive obligations than it is a reason to reject PROPORTIONALITY. But I accept that in an imperfect world it might be preferable, all things considered, to make do with an incoherent tort system. That does not make it any less incoherent.

V. OVERDETERMINATION

Now consider yet another variant of the case above:

> **Overdetermining Negligence**: Big Corp and Little Corp both negligently fail to replace their outdated equipment. Both sets of equipment short-circuit at the same time. Both events start large fires, which spread independently and arrive at Greta's house at the same time. Greta's house is badly damaged.

In most jurisdictions, **Overdetermining Negligence** would be resolved in exactly the same way as **Joint Negligence**—Greta would have the option of suing either Big Corp or Little Corp for 100 percent of her losses, at which point whichever company she chose would have a claim against the other company for a contribution toward the damages paid.[59] But the two cases are treated very differently by PROPORTIONALITY. Whereas in **Joint Negligence** Big Corp's negligence and Little Corp's negligence collectively caused the

legitimately pursue within the tort system"; JULES L. COLEMAN, THE PRACTICE OF PRINCIPLE (2001), at 392.

59. "Any person liable in respect of any damage suffered by another person may recover contribution from any other person liable in respect of the same damage (*whether jointly with him or otherwise*)." Civil Liability (Contribution) Act, 1978, §1(1) (U.K.) (emphasis added).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

damage, in **Overdetermining Negligence** they each *individually* caused the damage. Big Corp and Little Corp are therefore both fully liable (i.e., liable to degree 1) for the damage, according to PROPORTIONALITY. Hence, in this case, Greta *can* choose to sue either company for 100 percent of her losses. Suppose she chooses Big Corp; what then happens to Little Corp? Little Corp, just like Big Corp, breached a first-order duty that gave rise to a second-order duty to restore Greta to the state she would have been in but for the damage to her house. But once Big Corp pays up, Greta is *already* in the state she would have been in but for the damage to her house (or as close as monetary compensation is likely to get her, at any rate). Hence I submit that Little Corp is not required to make any contribution toward Greta's losses—once Big Corp discharges its second-order duty of repair, Little Corp is relieved of its second-order duty of repair on account of there being nothing left to repair.[60] Moreover, Big Corp now has no right against Little Corp to recover any of the damages it paid to Greta—after all, Big Corp has not been wronged by Little Corp, and so there is no wrong such a settlement could be interpreted as correcting.

This may strike you as unfair. After all, Little Corp is just as much to blame for the damage to Greta's house as Big Corp is. It seems wrong to allow Little Corp to get away with its actions just because Greta chose to sue someone else.[61] I agree that there is *something* unfair about Little Corp getting away with its negligent behavior. But this is a retributive injustice, not a corrective one.[62] To illustrate, consider **Noncausal Negligence** again. In this case, Big Corp's negligence could easily have caused damage to Greta's house; but as it happened, Greta's house was burnt down by a fire caused entirely by the lightning strike. From a retributive perspective, it might seem unfair to allow Big Corp to avoid financial penalty—it was clearly only a matter of luck, after all, that its negligence caused no harm. But tort law uncontroversially cannot deliver this punishment, because Big Corp's negligence was not a cause of Greta's loss.

I think exactly the same considerations apply to **Overdetermining Negligence**. It is not part of the remit of tort law to ensure that Little Corp is punished in **Overdetermining Negligence**, no matter how blameworthy it might be. Once Big Corp has compensated Greta for her losses, the demands of corrective justice have been met, and Little Corp is relieved of its second-order duty without having to discharge it. How Little Corp ought to be punished, if at all, for wrongfully causing Greta's loss is an important question, but it is a question of retributive justice, not corrective justice, and hence not a question to which tort law need provide an answer. Little Corp may well have committed a *crime* as well as a tort, for which it may still be

60. Note that there is a difference between someone's being *relieved* of a duty and her *discharging* that duty—one can be relieved of a duty without actually discharging it.

61. Thanks to Sara Bernstein for pressing this objection.

62. One can also see this as a distributive injustice—the costs of repairing Greta's house have been distributed unfairly. *See supra* for my response to this concern.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

prosecuted even after civil proceedings have come to an end—if so, it is the responsibility of the criminal justice system to ensure that retributive justice is done.

Again, some people might insist that even if it is fundamentally a system of corrective justice, tort law can still legitimately be used to pursue retributive goals, perhaps in order to pick up some of the slack created by the state's failure to address them. Some jurisdictions, for example, allow claimants to sue for punitive damages, over and above ordinary damages, in cases where the defendant's conduct is judged to be particularly insidious.[63] Punitive damages very obviously have nothing to do with meeting the demands of corrective justice. Rather, "an award of punitive damages expresses the community's abhorrence at the defendant's act [and] commutes our indignation into a kind of civil fine, civil punishment."[64]

But again, the danger with this approach is that we end up with a tort system that cannot be justified on either corrective or retributive grounds. Suppose that Big Corp's negligence in **Overdetermining Negligence** was particularly insidious. Perhaps Big Corp had known all along about the risks its outdated equipment posed to Greta but deliberately and cynically ignored them. Greta is awarded compensatory damages to cover her losses and an extra sum in punitive damages. The extra sum is justified on retributive grounds, because the compensatory damages were insufficient to punish Big Corp properly for its particularly blameworthy behavior. But why should *Greta* receive the punitive damages? Her losses have already been repaid. There are many victims who cannot recover through the tort system at all; why should the punitive award not go to them instead? Some have suggested that "[p]unitive damages . . . are awarded to the injured party as a reward for his public service in bringing the wrongdoer to account."[65] But this is difficult to sustain; after all, members of the public who assist the police in bringing criminals to account tend not to receive million- or billion-dollar rewards for their efforts, except perhaps in exceptional cases.

Normative coherence in tort law can be achieved only by using it purely to pursue the demands of corrective justice, and this means replacing THRESHOLD with PROPORTIONALITY across the board. Holding everything else fixed, such a change would probably increase the level of retributive injustice in the world, because some wrongdoers would receive less punishment than they deserve. Personally, I think this is more a reason for the state to face

63. Punitive damages are established features of case law in the United States and to a lesser extent in Canada. For guidelines, *see* BMW of N. Am. v. Gore, 517 U.S. 519 (1996); Whiten v. Pilot Ins., [2002] 1 S.C.R. 595 (Can.). Punitive damages are much less common elsewhere, though they are allowed in exceptional cases for lower sums in Australia—*see Gray v Motor Accident Comm'n* (1998) 196 CLR 1 (Austl.)—and in New Zealand, despite the abolition of compensatory tort damages with the creation of the Accident Compensation Corporation; *see Auckland City Council v Blundell* [1986] 1 NZLR 732 (N.Z).

64. Kemezy v. Peters, 79 F.3d 33, 35 (7th Cir. 1996). This judgment was explicit about the fact that one of the functions of punitive damages is to "relieve the pressures on the criminal justice system." *Id.*

65. Neal v. Newburger Co., 154 Miss. 691, 700 (1929).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

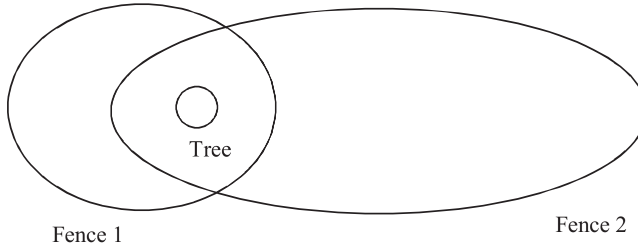

FIGURE 1 Two fences surround a tree.

up to its retributive obligations than it is a reason to reject PROPORTIONALITY. But I accept that in an imperfect world it might be preferable, all things considered, to make do with an incoherent tort system. That does not make it any less incoherent.

Imagine a tree surrounded by two fences made of vertical wooden planks. The fences intersect at two points (see fig. 1). Consider the plank of wood at one of the points of intersection. It contributes to two different surroundings of the tree, the surrounding by Fence 1 and the surrounding by Fence 2. Moreover, it contributes less to the surrounding by Fence 2 than it does to the surrounding by Fence 1, because Fence 2 is longer than Fence 1. A plank of wood can contribute to some degree to one surrounding of a tree and contribute to a different degree to another surrounding of that very same tree.

The same is true for causation;[66] an event can contribute to some degree to one causing of an effect and contribute to a different degree to another causing of that very same effect. For example, suppose D_1, D_2, and D_3 are the members of the executive committee of a manufacturing company. They all vote in favor of not replacing their outdated equipment. The equipment later short-circuits, starting a fire that causes damage to C's property. Let V_1, V_2, and V_3 be the events of D_1, D_2, and D_3, respectively, voting in favor of the motion not to replace the equipment. Because two votes would have been sufficient for the motion to pass, there are three pluralities of events that were minimally jointly sufficient (in the circumstances) for the damage: $[V_1, V_2]$, $[V_1, V_3]$, and $[V_2, V_3]$. So according to MINIMAL SUFFICIENCY (see Section II), the damage was caused *three times* by three different pluralities of events. But these pluralities are overlapping—each event contributed to more than one causing of the damage. Depending on the values of the relevant conditional probabilities, then, it is possible that these events contributed to different degrees to different causings of the damage. V_1, for example, might have contributed to degree 0.3 to the causing by V_1 and V_2 and contributed to degree 0.5 to the causing by V_1 and V_3.

66. *See* Kaiserman, *supra* note 7, at 392.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

This raises an important question: To what degree should D_1 be held liable for the damage to C's property in such a case? On the face of it, there are a number of options. One option would be to add the two degrees of contribution together, so that D_1's degree of liability for C's loss is $0.5 + 0.3 = 0.8$. Another option would be to take the average of the two values, so that D_1's degree of liability for C's loss is $\frac{0.5 + 0.3}{2} = 0.4$. I think neither of these strategies is ultimately correct, however. Instead, D_1 should be held liable for C's loss to degree 0.5—the larger of the two degrees of contribution.

To see this, suppose first that Nina poisons Oscar's lunch. But she wants to make sure of his death—so at just the moment when Oscar is about to succumb to the poison, she fatally shoots him. Oscar's death is overdetermined by the shooting and the poisoning. In this case, then, Nina performs two actions, each of which individually caused a death. But it surely would not be right to charge Nina with two counts of murder. To do so would intuitively involve some objectionable double-counting, because it was the same death caused twice over.

Now consider a slightly different case. As before, Nina poisons Oscar's lunch, and also shoots him at just the moment he is about to succumb to the poison. But this time, her gunshot wounds Oscar nonfatally. However, at the same time, Patrick also shoots Oscar nonfatally, in such a way that the two gunshots are collectively (but not individually) sufficient, in the circumstances, for Oscar's death. As before, Oscar's death is caused twice—once by the poisoning and once by the two gunshots. Suppose Nina's gunshot contributes to degree 0.5 to the latter causing. Hence, in this case, Nina contributes to degree 1 to one causing of Oscar's death and also contributes to degree 0.5 to a different causing of Oscar's death.

I think the right reaction in this case is again to charge Nina with a single count of murder. To punish her separately for her contributions to both causings of Oscar's death would involve the same kind of objectionable double-counting as in the case above. But on the other hand, it would be absurd to reason that because her average contribution to causings of Oscar's death is 0.75, she should be punished less than if she had merely murdered Oscar by poisoning alone.

These cases are not exactly analogous to the voting case—Nina performs two separate actions here, each of which contributes to a different causing of Oscar's death, whereas in the voting case, D_1 performs a single action that itself contributes to two different causings of C's injury. Nevertheless, I submit, similar considerations apply. To hold D_1 liable to a degree equal to the sum of the two degrees of contribution would involve some objectionable double-counting, because it is the same injury being caused twice over. To take the average of the two degrees of contribution, on the other hand, would be to let D_1 off too lightly. So we should take the larger of the two degrees of contribution and ignore the other. This means that D_1 should be held liable to degree 0.5 for C's loss; and this means that C could sue

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

D_1 for up to 50 percent of his loss, depending on how much he has already recovered from the other defendants.

VI. CONCLUSION

In this paper, I defend a causal theory of partial liability: a defendant should be held liable for a claimant's loss only to the degree to which the defendant's wrongdoing contributed to the causing of the loss. Though this view has some revisionary consequences, I argue that they can be defended, at least on a conception of tort law as a system of corrective—and not distributive or retributive—justice.

Some people might agree with everything I say in theory but worry that in practice adopting PROPORTIONALITY across the board would lead to chaos. "Causation itself is difficult enough; degrees of causation would really be a nightmare."[67] Determining degrees of causal contribution is difficult and time-consuming, and different judges and juries might come to entirely different conclusions. Defendants and claimants who know the law might still therefore be ignorant of the likely outcome of legal action. This threatens the principle of the rule of law, the idea that the outcome of a legal dispute should be determined by the law and not by the arbitrary decisions of the officials presiding over it.

I have some sympathy for these concerns. There is the question of how things ought to be in a perfect world ("ideal theory"), and then there is the question of how things ought to be, holding fixed the various imperfections of the world we live in ("nonideal theory"). This paper is an exercise in ideal theorizing. I defend a vision of what tort law should aim to be. I invite others more qualified than I to discuss any consequences my arguments may have for the more practical question of how things ought to be, holding fixed the limitations on resources and time and evidence that govern actual tort cases.

REFERENCES

Bacon, F. 1819. *Maxims of the Law.* In J. Spedding et al., eds., *The Works of Francis Bacon.* Vol. 4 (London: J. Johnson).

Barker, K., and Steele, J. 2015. "Drifting towards Proportionate Liability: Ethics and Pragmatics." *Cambridge Law Journal* 74(1):49–77.

Beale, J.H. 1920. "The Proximate Consequences of an Act." *Harvard Law Review* 33(5):633–658.

Beebee, H. 2013. "Legal Responsibility and Scalar Causation." *Jurisprudence* 4(1):102–108.

Bernstein, S. 2017. "Causal Proportions and Moral Responsibility." In D. Shoemaker ed., *Oxford Studies in Agency and Responsibility* (Oxford: Oxford University Press).

67. Stephen Chapman, *Apportionment of Liability between Tortfeasors,* 64 L.Q.R. 26, 28 (1948).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

Chapman, S. 1948. “Apportionment of Liability between Tortfeasors.” *Law Quarterly Review* 64(1):26–45.

Coleman, J.L. 1992. *Risks and Wrongs* (Cambridge, UK: Cambridge University Press).

Coleman, J.L. 2001. *The Practice of Principle* (Oxford: Oxford University Press).

Dretske, F. 1969. *Seeing and Knowing* (London: Routledge and Kegan Paul).

Edgarton, H.W. 1924. “Legal Cause.” *University of Pennsylvania Law Review* 72(3–4):211–244, 343–375.

Epstein, R.A. 1973. “A Theory of Strict Liability.” *Journal of Legal Studies* 2(1):151–204.

Fenton-Glynn, L. 2016. “A Proposed Probabilistic Extension of the Halpern and Pearl Definition of ‘Actual Cause.’” *British Journal for the Philosophy of Science* axv056. doi:10.1093/bjps/axv056.

Gardner, J. 2011. “What Is Tort Law For? Part 1. The Place of Corrective Justice.” *Law and Philosophy* 30(1):1–50.

Gardner, J. 2014. “What Is Tort Law For? Part 2. The Place of Distributive Justice.” In J. Oberdiek, ed., *Philosophical Foundations of Tort Law* (Oxford: Oxford University Press).

Green, L. 1927. *Rationale of Proximate Cause* (Kansas City, MO: Vernon Law Book Co.).

Hart, H.L.A., and Honoré, T. 1985. *Causation in the Law*. 2nd ed. (Oxford: Clarendon Press).

Hodgson, D. 2016. *The Law of Intervening Causation* (New York: Routledge).

Hurd, H.M., and Moore, M.S. 2002. “Negligence in the Air.” *Theoretical Enquiries in Law* 3(2):333–411.

James, F., and Perry, R.F. 1951. “Legal Cause.” *Yale Law Journal* 60(5):761–811.

Kaiserman, A. 2017. “Necessary Connections in Context.” *Erkenntnis* 82:45–64.

Kaiserman, A. 2016. “Causal Contribution.” *Proceedings of the Aristotelian Society* 166(3):387–394.

Lewis, D. 1980. “A Subjectivist’s Guide to Objective Chance.” In R.C. Jeffrey, ed., *Studies in Inductive Logic and Probability* (Berkeley: University of California Press).

Mackie, J.L. 1965. “Causes and Conditions.” *American Philosophical Quarterly* 2(4):245–264.

Malone, W. 1956. “Ruminations on Cause-in-Fact.” *Stanford Law Review* 9(1):60–99.

McNichols, W.J. 1979. “Judicial Elimination of Joint and Several Liability because of Comparative Negligence: A Puzzling Choice.” *Oklahoma Law Review* 32(1): 1–62.

Moore, M.S. 2009. *Causation and Responsibility* (Oxford: Oxford University Press).

Moore, M.S. 2013. “Author’s Reply.” *Jurisprudence* 4(1):121–137.

Pearl, J. 2000. *Causality: Models, Reasoning, and Inference* (Cambridge, UK: Cambridge University Press).

Pearson, R.N. 1979. “Apportionment of Losses under Comparative Fault Laws: An Analysis of the Alternatives.” *Louisiana Law Review* 40(2):323–372.

Pollock, F. 1920. *The Law of Torts*. 11th ed. (London: Stevens and Sons).

Posner, R., and Landes, W.M. 1980. “The Positive Economic Theory of Tort Law.” *Georgia Law Review* 15(4):851–924.

Ripstein, A. 1998. *Equality, Responsibility and the Law* (New York: Cambridge University Press).

Rogers, W.V.H., and van Boom, W.H. 2004. *Unification of Tort Law: Multiple Tortfeasors*. Vol. 9 (The Hague, Netherlands: Kluwer Law International).

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press

Sartorio, C. forthcoming. “A New Form of Moral Luck?” In A. Buckareff, C. Moya, and S. Rosell, eds., *Agency, Freedom, and Moral Responsibility* (London: Palgrave Macmillan).

Smith, J. 1911. “Legal Cause in Actions of Tort.” *Harvard Law Review* 25(2):103–128.

Stapleton, J. 2001. “Legal Cause: Cause-in-Fact and the Scope of Liability for Consequences.” *Vanderbilt Law Review* 54(3):941–1024.

Steel, S. 2015. *Proof of Causation in Tort Law* (Cambridge, UK: Cambridge University Press).

Steel, S., and Ibbetson, D. 2011. “More Grief on Uncertain Causation in Tort.” *Cambridge Law Journal* 70(2):451–468.

Strevens, M. 2007. “Mackie Remixed.” In J.K. Campbell, M. O’Rourke, and H.S. Silverstein, eds., *Causation and Explanation* (Cambridge, MA: MIT Press).

Strudler, A. 1992. “Mass Torts and Moral Principles.” *Law and Philosophy* 11(4):297–330.

Summers, R.S. 1982. *Instrumentalism and American Legal Theory* (Ithaca, NY: Cornell University Press).

Unger, P. 1977. “The Uniqueness in Causation.” *American Philosophical Quarterly* 14(3):177–188.

Weinrib, E.J. 1995. *The Idea of Private Law* (Cambridge, MA: Harvard University Press).

Woodward, J. 2003. *Making Things Happen: A Theory of Causal Explanation* (Oxford: Oxford University Press).

Wright, R.W. 1985. “Causation in Tort Law.” *California Law Review* 73(6):1735–1828.

Wright, R.W. 1988. “Allocating Liability among Multiple Responsible Causes: A Principled Defense of Joint and Several Liability for Actual Harm and Risk Exposure.” *University of California at Davis Law Review* 21(4):1141–1211.

https://doi.org/10.1017/S1352325217000040 Published online by Cambridge University Press