NOTES

RETHINKING ACTUAL CAUSATION IN TORT LAW

The concept of causation is central to myriad areas of tort law: a defendant commits simple battery only if she "intentionally *causes* bodily contact" with another;[1] she trespasses only if she "intentionally enters or *causes* tangible entry upon the land in possession of another";[2] she is liable for negligence only if she "*causes* personal injury or property damage" to another.[3] The list goes on.

It is perhaps unsurprising then that causation in tort law has been subject to rigorous analysis over the years by legal commentators[4] and the courts.[5] According to the dominant paradigm — articulated most notably by Professors H.L.A. Hart and Tony Honoré — causation comprises two components: "actual causation" (or "causation in fact") and "proximate causation."[6] Whereas the former component concerns the minimum requirements an action must meet in order to qualify as

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[1] DAN B. DOBBS ET AL., THE LAW OF TORTS § 33 (2d ed.), Westlaw (database updated June 2016) (emphasis added); *see also* RESTATEMENT (SECOND) OF TORTS § 13 (AM. LAW INST. 1965) ("An actor is subject to liability to another for battery if . . . he acts intending to cause a harmful or offensive contact with the person of the other or a third person . . . .").

[2] DOBBS ET AL., *supra* note 1, § 49 (emphasis added); *see also* RESTATEMENT (SECOND) OF TORTS § 158 ("One is subject to liability to another for trespass . . . if he intentionally . . . enters land in the possession of the other, or causes a thing or a third person to do so . . . .").

[3] DOBBS ET AL., *supra* note 1, § 120 (emphasis added); *see also* RESTATEMENT (SECOND) OF TORTS § 281 ("The actor is liable for an invasion of an interest of another, if . . . the actor's conduct is a legal cause of the invasion . . . .").

[4] *See generally, e.g.*, H.L.A. HART & TONY HONORÉ, CAUSATION IN THE LAW (2d ed. 1985); ROBERT E. KEETON, LEGAL CAUSE IN THE LAW OF TORTS (1963); MICHAEL S. MOORE, CAUSATION AND RESPONSIBILITY (2009); Guido Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69 (1975); Henry W. Edgerton, *Legal Cause*, 72 U. PA. L. REV. 211 (1924); Fleming James Jr. & Roger F. Perry, *Legal Cause*, 60 YALE L.J. 761 (1951); James Angell McLaughlin, *Proximate Cause*, 39 HARV. L. REV. 149 (1925).

[5] *See, e.g.*, *In re* Hanford Nuclear Reservation Litig., 292 F.3d 1124, 1133–35 (9th Cir. 2002) (discussing the distinction between proving that a defendant's conduct is *capable* of causing a plaintiff's harm and proving that a defendant's conduct *did* cause a plaintiff's harm); Kramer Serv., Inc. v. Wilkins, 186 So. 625, 627 (Miss. 1939) (discussing the problems inherent in putting questions of causation to the jury where the possibility that a defendant's conduct caused a plaintiff's injury is remote); City of St. Louis v. Benjamin Moore & Co., 226 S.W.3d 110, 113–16 (Mo. 2007) (en banc) (discussing whether a plaintiff can prove causation based solely on the defendant's market share in manufacturing and distributing a product that caused harm, without being able to match a particular harm to a particular defendant); Stubbs v. City of Rochester, 124 N.E. 137, 140 (N.Y. 1919) (discussing whether a plaintiff must rule out all other possible causes of an injury in order to prove that a defendant caused the injury).

[6] *See* HART & HONORÉ, *supra* note 4, at 90.

a cause of an injury,[7] the latter provides criteria for determining which actual causes are susceptible to legal liability.[8]

As might be expected, inquiries into the nature of proximate causation are difficult, in part because of the thorny moral issues they raise and the byzantine exercises in line drawing they require.[9] No less complicated, however, are analyses of actual causation,[10] which will be the exclusive focus of this Note. The standard definition of actual causation may appear straightforward at first: a defendant actually causes a plaintiff's injury if the defendant's action is a "but-for" cause of the injury, meaning that the injury would not have occurred "but for" (had it not been for) the defendant's action.[11] Yet notwithstanding its apparent simplicity, the but-for — or counterfactual — conception of actual causation has well-recognized problems. Indeed, as any first-year torts student knows, there are corner cases in which the conception appears to break down. When an injury is "overdetermined" by two actors' conduct,[12] or when one actor causes an injury, thereby "preempt[ing]" a second actor from causing the injury himself,[13] the but-for conception suggests that none of the actors is an actual cause of the injury (and thus that none of the actors can be held liable in tort).[14] These corner cases have proved vexing enough to inspire a cot-

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[7] *See, e.g.*, Charles E. Carpenter, *Concurrent Causation*, 83 U. PA. L. REV. 941, 941 (1935) ("Causation in fact as the term is used in law is very inclusive. It means any and all antecedents, active or passive, creative or receptive, which were factors actually involved in producing a consequence.").

[8] *See In re* Kinsman Transit Co., 338 F.2d 708, 725 (2d Cir. 1964) (Friendly, J.) ("[T]he careless actor will [not] always be held for all damages for which the forces that he risked were a cause in fact. Somewhere a point will be reached when courts will agree that the link has become too tenuous — that what is claimed to be consequence is only fortuity."); *see also* Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 103 (N.Y. 1928) (Andrews, J., dissenting) ("As we have said, we cannot trace the effect of an act to the end, if end there is. Again, however, we may trace it part of the way.").

[9] *See* Exxon Co., U.S.A. v. Sofec, Inc., 517 U.S. 830, 838 (1996) ("It is true that commentators have often lamented the degree of disagreement regarding the principles of proximate causation and confusion in the doctrine's application . . . ."); *Palsgraf*, 162 N.E. at 103 (Andrews, J., dissenting) ("What we do mean by the word 'proximate' is that, because of convenience, of public policy, of a rough sense of justice, the law arbitrarily declines to trace a series of events beyond a certain point. This is not logic. It is practical politics.").

[10] *But see* Lawrence Crocker, *A Retributive Theory of Criminal Causation*, 5 J. CONTEMP. LEGAL ISSUES 65, 67 (1994) ("Judges comment from time to time on how difficult is the concept of legal or proximate causation in comparison to the straightforward concept variously referred to as 'cause in fact' or 'scientific' or 'but for' causation.").

[11] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. b (AM. LAW INST. 2005).

[12] *Id.* § 27 cmt. b ("Courts and scholars have long recognized the problem of overdetermined harm — harm produced by multiple sufficient causes — and the inadequacy of the but-for standard for this situation.").

[13] Richard W. Wright, *Causation in Tort Law*, 73 CALIF. L. REV. 1735, 1775 (1985).

[14] *See id.* at 1775–76. Lawyers often discuss *Summers v. Tice*, 199 P.2d 1 (Cal. 1948) (en banc) — in which two quail hunters negligently shot at a third, who sustained injuries to his eye

tage industry in related legal scholarship,[15] but the rest of the legal profession, to the extent it thinks about these corner cases at all, seems to view them as exceptions to an otherwise accurate rule.[16]

The problem with this view is that it ignores the full import of the corner cases just described. As Professor Michael Moore writes in his magnum opus, *Causation and Responsibility*: "[T]he number of [corner] cases that actually occur in real life is irrelevant to the problem they pose for the counterfactual theory. Unless appearances are deceiving, the [corner] cases by themselves show that the counterfactual theory cannot be a theory of causation."[17] It is with Moore's criticism in mind that this Note seeks to depart from mainstream acceptance of but-for causation and to explore possible alternatives. The Note's aims are thus metaphysical: to accurately describe the relation that obtains between actual causes and their effects.

Part I briefly states the case against but-for causation, suggesting not only that the counterfactual conception fails to account for corner cases like those described above, but also that it may face deeper analytical problems. Part II discusses the most prominent set of alternative accounts that have been proposed in the legal literature: those that define causation in terms of the sufficient conditions for a given result. As this Part illustrates, sufficiency theories solve a number of problems facing counterfactual accounts, but they also confront issues of their own. In order to address these issues, this Part draws on the work of philosopher Ned Hall, whose "intrinsicness thesis," taken together with a revised definition of sufficiency, offers a promising framework for analyzing actual causation.[18] Although Hall's formulation is not per-

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and lip, *id.* at 1–2 — as if it were an overdetermination case. In reality, the issue in *Summers* was one of factual uncertainty, in that the trial court was unable to determine which defendant caused the plaintiff's injuries. *Id.* at 3. A genuine example of overdetermination appears in *Kingston v. Chicago & Northwestern Railway Co.*, 211 N.W. 913 (Wis. 1927), in which a fire started by the defendant merged with a fire "of unknown origin" to destroy the property of the plaintiff, and in which either fire, "in the absence of the other, would have accomplished such result." *Id.* at 914.

15 *See, e.g.*, MOORE, *supra* note 4, at 410–25; Richard Fumerton & Ken Kress, *Causation and the Law: Preemption, Lawful Sufficiency, and Causal Sufficiency*, LAW & CONTEMP. PROBS., Autumn 2001, at 83; Mark Kelman, *The Necessary Myth of Objective Causation Judgments in Liberal Political Theory*, 63 CHI.-KENT L. REV. 579 (1987); Jane Stapleton, *Choosing What We Mean by "Causation" in the Law*, 73 MO. L. REV. 433 (2008); Wright, *supra* note 13.

16 *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 reporters' note cmt. b ("Courts and scholars routinely acknowledge that the but-for test is central to determining factual cause."); MOORE, *supra* note 4, at 410–11 ("Those many legal theorists who recognize that none of the defensive maneuvers [to overdetermination objections] . . . rescue the theory [of but-for causation], nonetheless put aside the overdetermination cases as an unimportant and rare kind of aberrational side show.").

17 MOORE, *supra* note 4, at 411. It is also worth noting that such cases do in fact arise. *See supra* note 14; *infra* notes 28–29.

18 *See* Ned Hall, *The Intrinsic Character of Causation*, *in* 1 OXFORD STUDIES IN METAPHYSICS 255 (Dean W. Zimmerman ed., 2004).

fect, this Part argues, it is an improvement over the other accounts. Part III concludes.

I. BUT-FOR CAUSATION

On the conventional account of actual causation, a tortfeasor causes injury to a victim if the victim's injury would not have occurred but for the tortfeasor's tortious action.[19] The account is a capacious one, as it accords causal status to a wide range of legally irrelevant actions[20]: if Jay drives negligently into Myrtle, thereby injuring her, then the mechanic who repaired Jay's car earlier in the day is an actual cause of Myrtle's injury, because Jay would not have had a car to drive but for the mechanic's repairs. The conventional account also sets important limits, however, on who can be held liable in tort: if Jay is driving negligently, and Myrtle is injured in an unrelated accident on the other side of town, then Jay is not an actual cause of Myrtle's injury because Myrtle still would have been injured but for Jay's negligent driving.[21] In this case, the conventional account is undeniably intuitive in its explanatory power.

It doesn't take long, however, for the conventional account to run into problems it seems unable to solve. Specifically, in cases of overdetermination and preemption, the but-for conception denies causal status to actions that appear intuitively causal.[22] Beginning with cases of overdetermination — in which multiple tortfeasors' actions are independently sufficient for a victim's injury[23] — we might imagine that at the exact moment Jay drives negligently into Myrtle, another driver, Daisy, also drives negligently into Myrtle. If the injury Myrtle sustains (say, a broken leg) is one that either driver alone would have inflicted in the absence of the other, then, under the but-for test, it looks like neither driver has actually caused Myrtle's injury (since Daisy still would have broken Myrtle's leg but for Jay's driving, and

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19 *See* HART & HONORÉ, *supra* note 4, at 110 ("So when a negative answer is forthcoming to the question 'Would *Y* have occurred if *X* had not?' *X* is referred to not merely as a 'necessary condition' or *sine qua non* of *Y* but as its 'cause in fact' or 'material cause.'").

20 In practice, this capaciousness is not unduly problematic, because we inquire into the causal status of an actor's conduct only after we have determined that the actor has done something tortious.

21 *See* HART & HONORÉ, *supra* note 4, at 111 ("The necessity of the cause for the production of the consequence means that, in making causal statements, we must consult our knowledge of the general course of events."); *see also* Kramer Serv., Inc. v. Wilkins, 186 So. 625, 627 (Miss. 1939) ("It is not enough that negligence of one person and injury to another coexisted, but the injury must have been caused by the negligence.").

22 *See* MOORE, *supra* note 4, at 410 ("For example, if each of two fires is sufficient for the destruction of a house, then it follows that neither fire is independently necessary for the house's destruction. On the usual counterfactual theory of causation . . . that means that neither fire caused the destruction of the house!").

23 *See* HART & HONORÉ, *supra* note 4, at 123.

vice versa). Even more vexing are cases of preemption, in which one tortfeasor's infliction of an injury prevents another actor from inflicting the same injury.[24] We might imagine, for example, that Daisy slows down after seeing Jay enter the intersection where Jay injures Myrtle. If Daisy would have entered the intersection in Jay's absence and inflicted the same injury instead, then Jay's negligence is not a but-for cause of Myrtle's injury (again, because Daisy still would have injured Myrtle but for Jay's negligence).[25]

What's more, standard attempts in the legal literature to reconcile the but-for conception with overdetermination and preemption cases are fundamentally unavailing. Such attempts often seek to redefine the victim's injury in a "fine-grained"[26] way, such that it becomes true that the injury would not have occurred but for the relevant tortfeasor's action.[27] In the above cases, for example, Myrtle's injury would be redefined in terms of the particular way in which her leg broke; so defined, it might no longer be true that Myrtle's injury would still have occurred but for Jay's negligent driving (because the injury would not have occurred in exactly the same way if Myrtle had been hit only by Daisy), and Jay could rightly be called an actual cause. While this strategy has intuitive appeal, it runs into multiple problems, the most fatal of which is that overdetermination and preemption scenarios can be revised so that a victim's injury would have occurred *exactly* as it actually did in the absence of the relevant tortfeasor's action. Such revision requires some creativity in cases of physical injury,[28] but it is trivially easy in other cases, such as those involving fraudulent misrepresentation.[29] The takeaway is that but-for causa-

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[24] *See* MOORE, *supra* note 4, at 412; Ned Hall & L.A. Paul, *Causation and Pre-emption*, *in* PHILOSOPHY OF SCIENCE TODAY 100, 107–14 (Peter Clark & Katherine Hawley eds., 2003).

[25] *See* MOORE, *supra* note 4, at 412.

[26] Michael Moore, *For What Must We Pay? Causation and Counterfactual Baselines*, 40 SAN DIEGO L. REV. 1181, 1237 (2003).

[27] *See, e.g.*, ARNO C. BECHT & FRANK W. MILLER, THE TEST OF FACTUAL CAUSATION IN NEGLIGENCE AND STRICT LIABILITY CASES 16–18 (1961).

[28] In the preemption case, we might imagine that Jay and Daisy are driving cars of the exact same make and model, and we might imagine further that, in Jay's absence, Daisy would have been driving at exactly the same speed, in exactly the same location, at exactly the same time. Some might quibble that there will inevitably be subtle differences between Myrtle's injury in each scenario (maybe because the weights or speeds of the two cars would have been slightly different), but with a little imagination we can always revise the scenarios to eliminate these differences. *See* Ben Gifford, State v. Brelo *and the Problem of Actual Causation*, 44 AM. J. CRIM. L. (forthcoming 2017) (manuscript at 25–31), https://ssrn.com/abstract=2850558 [https://perma.cc/KP8B-V4AY].

[29] We might suppose, for example, that Jay and Daisy — instead of being negligent drivers — are scam artists who independently induce Myrtle to invest her life savings in a fraudulent enterprise. If Myrtle would have relied on either inducement alone, then any economic loss she sustains will be exactly the same in the absence of either Jay's or Daisy's tortious conduct. *See* RESTATEMENT (SECOND) OF TORTS § 525 (AM. LAW INST. 1977) ("One who fraudulently

tion seems unable to account for cases of overdetermination and preemption.

Furthermore, beyond the corner cases just discussed, counterfactual accounts raise fundamental analytical objections. To explore these objections, it is helpful to begin by clarifying what we mean when we say that a given victim's injury would not have occurred but for a given tortfeasor's action. Although a discussion of "possible world" semantics is well outside the scope of this Note,[30] it suffices to say that counterfactual propositions like "Myrtle would not have been injured but for Jay's negligent driving" describe how things would have been if the world were different, *but not that different*, from the way that it actually is.[31] When we discuss what would have happened but for Jay's negligent driving, for example, we are not talking about *all* the possible scenarios in which Jay did not drive negligently into Myrtle: we are not talking about the scenarios in which Jay never bought a car or in which he was never born.[32] Instead we are talking about near misses: scenarios in which Jay was paying attention to the road instead of texting; in which he slowed down instead of accelerating into the intersection.[33] How we identify the relevant near miss will of course be contentious,[34] but once identified, all that remains of the causal analy-

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makes a misrepresentation of fact, opinion, intention or law for the purpose of inducing another to act or to refrain from action in reliance upon it, is subject to liability to the other in deceit for pecuniary loss caused to him by his justifiable reliance upon the misrepresentation.").

30 For a helpful overview of possible worlds and possible world semantics, see generally Michael J. Loux, *Introduction: Modality and Metaphysics*, *in* THE POSSIBLE AND THE ACTUAL: READINGS IN THE METAPHYSICS OF MODALITY 15 (Michael J. Loux ed., 1979); and Christopher Menzel, *Possible Worlds*, *in* STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2016), https://plato.stanford.edu/archives/win2016/entries/possible-worlds/ [https://perma.cc/HZL7-WJG6].

31 *See* David Lewis, *Counterfactuals and Comparative Possibility*, 2 J. PHIL. LOGIC 418, 420 (1973) ("If we cannot have an antecedent-world [that is, a world in which a counterfactual antecedent is true] that is otherwise just like our world, what can we have? This, perhaps: an antecedent-world that does not differ gratuitously from ours; one that differs only as much as it must to permit the antecedent to hold; one that is closer to our world in similarity, all things considered, than any other antecedent world.").

32 *See* Robert N. Strassfeld, *If . . . : Counterfactuals in the Law*, 60 GEO. WASH. L. REV. 339, 343 (1992) ("Some counterfactuals may be plausible but irrelevant because their antecedents lack legal significance.").

33 *See* Jonathan Schaffer, *Contrastive Causation in the Law*, 16 LEGAL THEORY 259, 260 (2010) (arguing that courtroom judgments of causation, although explicitly framed in absolute terms (for example, "Would the actual damage to the plaintiff still have occurred had the defendant's actual breach of duty not occurred?"), are implicitly made, and normatively should be made, in contrastive terms (for example, "Would a better outcome for the plaintiff have occurred than the actual outcome had the defendant acted lawfully instead of breaching duty?")).

34 The plaintiff will claim that the relevant counterfactual scenario is one in which the injury does not occur, thereby supporting a finding of causation. In a negligence case, the plaintiff might make such a claim by arguing that the defendant's conduct fell so far below the standard of care that the scenario would have been much different if the defendant had behaved nonnegligently.

sis is to ask whether Myrtle still would have been injured in that scenario.[35] If we agree, for example, that the relevant scenario is the one in which Jay slows down, and if we agree that Myrtle would not have been injured in that scenario (an inquiry that will also be contentious[36]), then Jay's negligent driving is a cause of Myrtle's injury.

The problem with this counterfactual account of causation (beyond its failure to cover the corner cases above) is that it appears radically overinclusive, as it seems to render Jay's negligent driving a cause of both *historical* and *unrelated* effects.[37] We confront this issue once we ask *what else* would have happened if Jay had not driven negligently: presumably, the entire chain of events leading up to the accident would have been changed, as nothing occurs in a vacuum. If actual causation just depends on what would have happened if Jay had not driven negligently, then Jay's negligent driving is an actual cause of all these changed events, even though they occurred in the *past*.[38] Furthermore, each of these past changed events would have precipitated future changes that were completely unrelated to Jay's driving; and yet, on the but-for account of causation, Jay's negligent driving is a cause of these future changes as well.[39]

The following stylized example may help to illustrate the point. Assume that Jay is incapable of driving nonnegligently if he has forgotten to make coffee in the morning. Assume also that Jay forgot to

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The more different the scenario in which the defendant behaves nonnegligently, the plaintiff will argue, the more likely it is that the victim's injury does not occur in that scenario.

[35] One empirical factor that may complicate the analysis here is that people's emotional reactions to an injury appear to increase as it becomes easier for them to imagine the counterfactual scenario in which the victim is not injured. *See* Dale T. Miller & Cathy McFarland, *Counterfactual Thinking and Victim Compensation: A Test of Norm Theory*, 12 PERSONALITY & SOC. PSYCHOL. BULL. 513, 513–14 (1986). In such cases, the amount of damages people are willing to award might increase as well. *See id.* at 517.

[36] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. e (AM. LAW INST. 2005) ("[I]f a driver falls asleep and that driver's car crashes into another's home, assessing what would have occurred if the actor had not fallen asleep poses little difficulty. In other cases, especially those in which the tortious conduct consisted of marginally more risky conduct than is acceptable or in which the actor failed to take a precaution that would have reduced the risk to another, such as by warning of a danger, the counterfactual inquiry may pose difficult problems of proof.").

[37] *See* MOORE, *supra* note 4, at 400–09.

[38] *See id.* at 403 ("If some cause *c* is not only necessary but sufficient for some effect *e*, then *e* seems equally sufficient and necessary for *c*.").

[39] *See id.* at 401 ("[O]n the counterfactual theory, *c* causing *f* means that *c* was necessary to *f*. Suppose that *c* causing *e* on a given occasion means not only that *c* was necessary to *e* but also that, given the laws and circumstances other than *c*, *c* could not have failed to cause *e*. That means that *c*, together with the other circumstances, was sufficient for *e*. This means that *e* was necessary for *c*. Yet, that means that *e* was also necessary for *f* — if *e* had not occurred, then *c* would not have occurred, and if *c* had not occurred, then *f* would not have occurred. Thus, on the counterfactual theory of causation, *e* did cause *f*, which is an embarrassing conclusion for that theory.").

make coffee the morning he drove negligently into Myrtle. It follows that, if Jay had driven nonnegligently, he would have remembered to make coffee in the morning (because he is incapable of driving nonnegligently if he has forgotten to make coffee in the morning); his negligent driving is thus a but-for cause of his prior failure to make coffee. Assume further that Jay's roommate, Nick, made coffee later in the day, but that this is something Nick does only when Jay has forgotten to make coffee in the morning. It follows that Nick would not have made coffee later in the day if Jay had not driven negligently into Myrtle (because if Jay had not driven negligently into Myrtle, then Jay would have remembered to make coffee in the morning); Jay's negligent driving is thus a but-for cause of Nick's making coffee later in the day.

These conclusions — that Jay's negligent driving is a cause both of his own prior failure to make coffee and of Nick's making coffee later in the day — seem clearly wrong, as do those judgments arrived at in the overdetermination and preemption cases discussed above. The first objection — that counterfactual theories allow for temporally reversed causation[40] — is undoubtedly important, but it turns out to apply equally to other accounts of causation (including the sufficiency accounts discussed below).[41] While an independent justification of causal direction will thus be required by theories of causation generally,[42] such a project is too ambitious to achieve within the confines of this Note.

More serious for counterfactual theories is the objection that these accounts allow for causation between unrelated events, such as Jay's negligent driving and Nick's making coffee later in the day. Here we cannot resolve the objection simply by stipulating that causes precede their effects, since Jay's negligent driving *does* precede Nick's making coffee. Instead the standard approach in the philosophical literature is to impose a "non-backtracking" condition on counterfactual analyses, such that we hold fixed all prior events when asking what would have happened in the absence of a given action.[43] When we ask, for exam-

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[40] *See generally* Jan Faye, *Backward Causation*, *in* STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2017), https://plato.stanford.edu/archives/spr2017/entries/causation-backwards/ [https://perma.cc/G9X9-GDKU].

[41] *See infra* pp. 2174–75.

[42] *See* Jonathan Schaffer, *The Metaphysics of Causation*, *in* STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2016), https://plato.stanford.edu/archives/fall2016/entries/causation-metaphysics/ [https://perma.cc/4UCU-HJ4K] ("An adequate account of the causal relation should reveal . . . which direction the causal arrows point . . . .").

[43] L.A. PAUL & NED HALL, CAUSATION: A USER'S GUIDE 17 (2013). The imposition of a non-backtracking condition is analytically distinct from the stipulation that causes precede their effects. Whereas the former condition holds prior events fixed, the latter stipulation allows prior events to vary, but denies that the variation is caused by the existence or absence of the future action.

ple, what would have happened had Jay not driven negligently, we hold fixed the fact that he forgot to make coffee that morning. With that prior event held fixed, it follows that Nick would have made coffee later in the day regardless of Jay's negligence (because Jay would have forgotten to make coffee either way), and the latter is therefore not a cause of the former.

The problem with this solution is that it appears to violate the laws of nature.[44] After all, if Jay had not driven negligently — because, for example, he had slowed into the intersection instead of accelerating — then it seems like *some* prior events would almost certainly have had to be different, as a matter of basic physics. In order for Jay to slow into the intersection instead of accelerating, something would have had to change in Jay's brain (so that, among other things, he formed the intention to press the brake instead of the gas). By requiring instead that all prior events be held fixed (including Jay's neural activity), we seem to contemplate a hypothetical scenario in which all the antecedent conditions are in place for Jay to drive negligently, but in which he suddenly drives nonnegligently regardless.[45] Philosophers have been willing to accommodate such violations of the laws of nature, on the theory that "[i]t may be worth a small miracle"[46] to avoid problems like those created by cases of causation between unrelated events.[47] But this acceptance of small miracles is a fairly large metaphysical concession, and taken together with the issues of overdetermination and preemption discussed above, it casts serious doubt on theories of but-for causation.

II. SUFFICIENCY ACCOUNTS

Given the defects inherent in the counterfactual conception of causation, it is unsurprising that philosophers and legal scholars have proposed a number of alternative theories. This Part explores the most prominent strain in the legal literature: sufficiency accounts. Although sufficiency accounts share some problems with counterfactual ac-

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[44] *See* TIM MAUDLIN, *A Modest Proposal Concerning Laws, Counterfactuals, and Explanations*, *in* THE METAPHYSICS WITHIN PHYSICS 5, 32 (2007).

[45] Philosopher Tim Maudlin discusses this problem by assessing the following hypothetical: "If the bomb dropped on Hiroshima had contained titanium instead of uranium it would not have exploded." *Id.* at 22. In such a hypothetical, Maudlin suggests, it cannot be the case that a uranium-filled bomb was loaded onto the Enola Gay, even though a titanium-filled bomb was ultimately dropped. Instead: "The only obvious way to *get* the titanium bomb onto the flying Enola Gay is to have had it *put* there earlier . . . ." *Id.* at 32.

[46] David Lewis, *Causation*, 70 J. PHIL. 556, 560 (1973).

[47] *See id.* For further discussion of backtracking, see DANIEL M. HAUSMAN, CAUSAL ASYMMETRIES 123–26 (1998); MOORE, *supra* note 4, at 403–09; and Christopher Hitchcock, *Lewis on Causation*, *in* A COMPANION TO DAVID LEWIS 295, 297–98 (Barry Loewer & Jonathan Schaffer eds., 2015).

counts, this Part argues that there may be solutions available to the former that are unavailable to the latter. In particular, by appealing to philosopher Ned Hall's "[i]ntrinsicness thesis,"[48] as well as to his revised definition of sufficiency, the sufficiency theorist may be able to accommodate cases of overdetermination and preemption without according causal status to unrelated events. This Part concludes by highlighting lingering problems that the sufficiency theorist must address and by explaining briefly why the concept of "intrinsicness" cannot be invoked by theories of but-for causation.

A. Defining Sufficiency

The theory that causation consists in one event's (or set of events') *sufficiency* in bringing about the occurrence of another is often associated with the philosopher J.L. Mackie.[49] Mackie's emphasis on sufficiency appeals to our intuition that causation is not simply about counterfactual "dependence," but is also (at least in part) about the "production" of a given result.[50] In the legal literature, the sufficiency approach has been championed by Professor Richard Wright, who has reframed the analysis slightly in his "'NESS' (Necessary Element of a Sufficient Set) test," according to which a cause is "a necessary element of a set of antecedent actual conditions that was sufficient for the occurrence of" a result.[51] To illustrate how the NESS test works, consider the following example: Suppose that three people lean negligently on a car, thereby causing the car to fall over the edge of a cliff. If no one alone would have exerted enough force to push the car over the edge, but any two people would have, then none of the individuals is

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[48] Hall, *supra* note 18, at 256 (emphasis omitted).

[49] *See generally* J.L. Mackie, *Causes and Conditions*, 2 AM. PHIL. Q. 245 (1965).

[50] Ned Hall, *Two Concepts of Causation*, *in* CAUSATION AND COUNTERFACTUALS 225, 225 (John Collins et al. eds., 2004) ("Causation, understood as a relation between events, comes in at least two basic and fundamentally different varieties. One of these, . . . 'dependence,' is simply that: counterfactual dependence between wholly distinct events. . . . The second variety is rather more difficult to characterize, but we evoke it when we say of an event *c* that it helps to *generate* or *bring about* or *produce* another event *e* . . . .").

[51] Wright, *supra* note 13, at 1774; *see also* Richard W. Wright, *Causation, Responsibility, Risk, Probability, Naked Statistics, and Proof: Pruning the Bramble Bush by Clarifying the Concepts*, 73 IOWA L. REV. 1001, 1019 (1988) (stating the same formulation). As Wright notes, the NESS test has gained significant traction in the legal literature. *See* Richard W. Wright, *The NESS Account of Natural Causation: A Response to Criticisms*, *in* PERSPECTIVES ON CAUSATION 285, 285 & n.1 (Richard Goldberg ed., 2011) [hereinafter Wright, *The NESS Account*]; *see also* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 27 cmt. f (AM. LAW INST. 2005) ("[T]he fact that . . . [another] person's conduct is sufficient to cause [a] harm does not prevent [an] actor's conduct from being a factual cause of harm . . . if the actor's conduct is necessary to at least one causal set."); David A. Fischer, *Insufficient Causes*, 94 KY. L.J. 277, 277 (2005–2006) ("The NESS . . . test of causation, popularized by Professor Richard Wright, is emerging as the new supplement to the but-for test for the twenty-first century." (footnote omitted)).

necessary or sufficient for the car's destruction. However, within the group of three, there are three sets of two people, each of which is sufficient for the car's destruction. Moreover, each person in the group is necessary to the sufficiency of two of these sets. It follows that each person's negligence would count as a cause of the car's destruction on the NESS account.[52]

Sufficiency theories yield intuitive benefits in cases of overdetermination and preemption.[53] Applying Wright's NESS test to the examples above, we can see that Jay's negligent driving is a cause of Myrtle's injury in both scenarios: Jay's negligent driving is part of a set of antecedent actual conditions — which includes Jay's position and velocity, Myrtle's location, the state of the roads, and other factors — that is sufficient for Myrtle's injury. Furthermore, Jay's negligent driving is necessary to the sufficiency of this set, so long as the other members of the set are insufficient by themselves for Myrtle's injury. Note that sufficiency theories can be viewed as incorporating a counterfactual element; unlike counterfactual accounts of causation, however, sufficiency theories ask only whether a set of conditions would have been sufficient for a result, not whether the result would have happened in the absence of a particular element.[54]

Despite the aforementioned benefits, sufficiency theories face significant challenges. One challenge becomes clear when we analyze the causal status of Daisy in the overdetermination and preemption cases above. Applying the sufficiency theory to the overdetermination case in which Jay and Daisy simultaneously drive negligently into Myrtle, Daisy's negligent driving is *correctly* counted as a cause of Myrtle's injury, for the same reason that Jay's is. This outcome is a point of pride for the sufficiency theorist, as the counterfactual account of causation treats neither Jay nor Daisy as an actual cause of Myrtle's injury.[55] When we turn to the preemption case, however, in which Daisy slows down upon seeing Jay enter the intersection — but in which Daisy would have hit Myrtle in Jay's absence — it seems as though Daisy is

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[52] *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 27 cmt. f, illus. 3.

[53] *See* Wright, *supra* note 13, at 1791–98.

[54] When we assess whether a set of conditions is sufficient for a given result, it is important to note that we are assuming, in some sense, that those conditions are the only conditions that obtain. *See* Hall, *supra* note 50, at 259–60. When we say, for example, that Jay and Myrtle's relative positions and velocities are sufficient for Myrtle's injury, we are assuming that no good Samaritans will intervene at the last moment and push Myrtle out of the way. At the same time, we will have to assume that *some* other conditions obtain — it cannot be the case that Jay and Myrtle interact in a vacuum — and it is incumbent on the sufficiency theorist to explain exactly how these conditions are determined. *See* MOORE, *supra* note 4, at 475 ("A common objection to . . . sufficiency theories is that no finite sets of conditions are ever truly sufficient for the happening of some putative effect . . . .").

[55] *See supra* pp. 2166–67.

incorrectly counted as an actual cause of Myrtle's injury.[56] To illustrate, we can look to the state of the world moments before Daisy slows down: at that time, Daisy's driving appears to be a necessary part of a larger set of conditions — again including Myrtle's position and velocity, the state of the roads, and other factors — that is sufficient for Myrtle's injury.[57] It is irrelevant that Jay later renders this set of conditions insufficient through preemption; what matters is that the set of conditions to which Daisy is necessary is itself sufficient when viewed in isolation at the time in question.[58]

A second challenge facing sufficiency theories, which mirrors the issues discussed above in the context of counterfactual accounts, is that they appear to accord causal status to intuitively noncausal relationships. We can illustrate this problem by returning to a revised version of the scenario involving Jay, his morning coffee, and his roommate, Nick: Assume — in a slight variation of the original circumstances — that Jay is incapable of driving negligently if he has remembered to make coffee that morning. Assume also that Nick cannot help but make coffee later in the day when Jay has forgotten to do so in the morning. On these assumptions, if Jay drives negligently, then his negligent driving will be a necessary element of a sufficient set — and thus a cause — of his having forgotten to make coffee earlier in the morning (because Jay is incapable of driving negligently if he has remembered to make coffee in the morning), which will in turn be a similarly sufficient condition — and thus a cause — of Nick's making coffee later in the day. For a slightly less stylized example, Professors Richard Fumerton and Ken Kress offer the following: "[W]hen the sun is at a forty-five degree angle, and the shadow [of a flagpole] is five feet tall, law-like connections entail that the flagpole is ten feet tall.

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[56] *See* MOORE, *supra* note 4, at 491; Fumerton & Kress, *supra* note 15, at 100–02.

[57] *Cf.* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 27 cmt. i ("[F]rom a purely conceptual perspective, a person who negligently runs over a dead body would be sufficient (with the appropriate background conditions) to account for the body not being alive from that point forward.").

[58] Wright rejects the argument that sufficiency theories (or at least the NESS test) improperly accord causal status to preempted events. *See* Wright, *The NESS Account*, *supra* note 51, at 297–303. In response to MOORE, *supra* note 4, and Fumerton & Kress, *supra* note 15, Wright draws a distinction between "lawful sufficiency" and "causal sufficiency," Wright, *The NESS Account*, *supra* note 51, at 297, and argues that the latter concept requires certain conditions to be "fully instantiated" in order for an event to count as a cause, *id.* at 299. In the case of Daisy and Myrtle, for example, Wright would argue that the condition of Daisy colliding with an uninjured Myrtle must be instantiated in order for Daisy to count as causally sufficient for Myrtle's injury. *Cf. id.* (describing the requirements of instantiation in the context of a ship that is blocked by a sequence of collapsed bridges, only one of which is causally sufficient for the ship's delay). Moore would reply that "[t]he circularity of any such response should be apparent." MOORE, *supra* note 4, at 495; *see also* Fumerton & Kress, *supra* note 15, at 84 (arguing that Wright's reliance on the notion of causal sufficiency "risks vicious conceptual circularity").

But it would surely be a mistake to claim that the shadow causes the flagpole to be ten feet tall."[59]

These objections carry significant weight, but it would be premature to classify them as fatal. With respect to the objection that sufficiency theories allow for temporally reversed causation, we may argue, as we did in the case of counterfactual accounts, that the problem of temporal direction is not unique to sufficiency theories, but is instead endemic to multiple causal accounts. By stipulating that causes precede their effects, we can respond (at least partially) to Fumerton and Kress's example, because the casting of the five-foot shadow will occur only after the flagpole stands ten feet tall.[60] We will still have to contend, however, with objections that sufficiency accounts accord causal status to preempted events (like Daisy's driving, moments before slowing down) and other noncausal relationships (like the sufficiency of Jay's negligent driving for Nick's making coffee later in the day). In order to do so, we will have to find a noncircular method of qualifying our sufficiency analysis to distinguish between causal and noncausal relationships.

B. Incorporating Intrinsicness

One notable candidate from the contemporary philosophical literature is Hall's thesis of intrinsicness.[61] As its name suggests, the intrinsicness thesis appeals to the notion that "the causal structure of a process is . . . determined . . . by the intrinsic natures of the events that make up the process, together with the ways in which they are juxtaposed with one another, together with the laws that govern that process."[62] "[I]ntrinsic," in turn, is taken "to mean something like 'internal' or 'metaphysically independent'; intuitively, the way something is intrinsically is the way it is independent of how anything else is."[63] This section will argue that sufficiency accounts may be able to incorporate intrinsicness — along with Hall's revised conception of sufficiency — in order to avoid according causal status to preempted and unrelated events. The next section will argue that this approach is unavailable to the counterfactual theorist.

The intrinsicness thesis can be stated formally as follows:

> Let S be a structure of events consisting of event E, together with all of its causes back to some earlier time t. Let S′ be a structure of events whose

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[59] Fumerton & Kress, *supra* note 15, at 101–02.

[60] Richard W. Wright, *Causation: Metaphysics or Intuition?*, *in* LEGAL, MORAL, AND METAPHYSICAL TRUTHS 171, 174 (Kimberly Kessler Ferzan & Stephen J. Morse eds., 2016) ("[I]f the relevant law has directionality . . . [Fumerton and Kress's objection] is blocked.").

[61] *See generally* Hall, *supra* note 18.

[62] *Id.* at 255.

[63] PAUL & HALL, *supra* note 43, at 124.

> intrinsic character matches the intrinsic character of S and exists in a world with the same laws. Let E' be the event in S′ that corresponds to E in S. Let C be some event in S distinct from E, and let C' be the event in S′ that corresponds to C. Then C' is a cause of E'.[64]

At first glance, this abstract formulation may seem obvious. Its explanatory power becomes clear, however, once we apply it to the concrete cases we have been discussing.

Starting with the coffee example, we can build a structure S (also called a "blueprint"[65]) where E is the event of Nick making coffee and C is the prior event of Jay driving negligently into Myrtle. Note that we do not make any assumptions about what happens prior to C or after E; we are concerned only with the abstract causal structure between the two events. From E we can work backward to the earlier time t at which C occurs, adding to S all prior events that are causes of E. (On the sufficiency account, these include events like Nick being at various points on his morning trajectory, the existence of a certain amount of coffee grounds in the kitchen, and other factors.) When we finally arrive at time t, we can ask: should C be added to S? The answer is no, because Jay's negligent driving — if we ignore his prior failure to make coffee — is not necessary to any set of conditions at time t that is sufficient for Nick making coffee later in the day. And the intrinsicness thesis allows us to ignore Jay's prior failure to make coffee, not because we have imposed a non-backtracking condition,[66] but because S is a contained, abstract causal structure spanning from C to E. Furthermore, once we have decided that Jay's negligent driving should not be counted as a cause of Nick's making coffee in this abstract structure S, it will follow that, in any other structure S′ whose intrinsic character matches that of S, Jay's negligent driving (C') should not be counted as a cause of Nick's making coffee (E'). This will be true even if there is some event external to S′ — such as Jay's prior failure to make coffee — that would render Jay's negligent driving sufficient for Nick's making coffee later in the day.[67]

The application of the intrinsicness thesis gets a bit trickier when we move to preemption, since we have already seen that sufficiency accounts like Wright's NESS test appear *correctly* to count Jay as an actual cause of Myrtle's injury while *incorrectly* counting Daisy as one too.[68] If we are building a structure S in which E is Myrtle's injury and t is the moment before Daisy slows down, it thus seems that we will be required to add both Jay's driving and Daisy's driving to S

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[64] *Id.* at 127.

[65] *Id.*

[66] *See supra* pp. 2170–71.

[67] *See* PAUL & HALL, *supra* note 43, at 127.

[68] *See supra* text accompanying notes 53–58.

(because, as discussed above, each is necessary to a set of conditions sufficient for Myrtle's injury). Here Hall proposes a novel strategy: Instead of defining causes as necessary members of *any* sufficient set, the sufficiency theorist can define causes as necessary members of a *uniquely* sufficient set.[69] Furthermore, the sufficiency theorist can specify that this definition states only a sufficient condition for causation, not a necessary one, such that it properly recognizes causes in garden-variety cases, while "falling silent"[70] in cases of preemption and overdetermination (since those cases involve multiple sufficient sets for a given result).[71] Once causal structures are properly identified in garden-variety cases, the sufficiency theorist can then invoke intrinsicness to accord causal status to relationships within more complex causal structures, so long as those relationships match the intrinsic structure of the aforementioned garden-variety cases.[72]

Applying Hall's strategy to the preemption case above, we can see that the revised definition falls silent about whether we should add Jay's driving or Daisy's driving to S (since, at *t*, there is no uniquely sufficient set of conditions for Myrtle's injury).[73] The revised definition can, however, be applied fruitfully to two garden-variety scenarios: one in which Daisy is absent and Jay drives negligently into Myrtle, and another in which Jay is absent and Daisy drives negligently into Myrtle.[74] In the first scenario we can build a blueprint S_J in which E_J is Myrtle's injury and C_J is Jay's driving at *t*, and in the second scenario we can do the same with S_D, E_D, and C_D (which, in this case, would be Daisy's driving at *t*). Clearly, C_J should be added to S_J and C_D should be added to S_D, since each driver's actions are necessary to uniquely sufficient sets for Myrtle's injury when the other driver's actions are absent.[75] All that is left is to ask whether S_J or S_D matches the intrinsic structure of any of the relationships in the preemption case: here it looks like S_J matches the intrinsic structure of the relationship between Jay's driving and Myrtle's injury (because Jay drives negligently into Myrtle in the preemption case), while S_D *does not* match the intrinsic structure of the relationship between Daisy's driving and Myrtle's injury (because Daisy slows down and watches from

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69 Hall, *supra* note 18, at 276; *see also* PAUL & HALL, *supra* note 43, at 129–30.

70 Hall, *supra* note 18, at 277.

71 PAUL & HALL, *supra* note 43, at 129–30. "Falling silent" here means simply that the revised definition's sufficient conditions have not been met (because these conditions include necessary membership in a *uniquely* sufficient set, and overdetermination and preemption cases involve *multiple* sufficient sets).

72 Hall, *supra* note 18, at 277.

73 We will hold to the side Wright's objection, *supra* note 58, that only Jay's driving is sufficient because the conditions required for Daisy's causal sufficiency are not fully instantiated.

74 *See* Hall, *supra* note 18, at 278.

75 *See id.*

afar in the preemption case).[76] It follows that Jay's driving is a cause of Myrtle's injury in the preemption case, while Daisy's driving is not.

Although promising, Hall's strategy raises several questions. In particular, the strategy requires us to explain exactly what is needed for intrinsic structures to "match"[77] each other.[78] As Hall readily concedes, a match cannot mean a perfect match, because there always will be at least minor physical differences between different structures situated in different contexts.[79] In the preemption case, for example, the relationship between Jay's driving and Myrtle's injury will not match the intrinsic structure of S_J exactly, since the causal processes in the former case (but not the latter) will be slightly influenced by Daisy's distant presence (because, for example, Daisy exerts a minor gravitational force on the process).[80] At the same time, a match cannot be defined with respect to some set of irreducibly causal terms, such that we say simply that the relationship between Jay's driving and Myrtle's injury in the preemption case possesses the same causal characteristics as S_J, while the relationship between Daisy's driving and Myrtle's injury in the preemption case does not possess the same causal characteristics as S_D.[81] The question we initially sought to answer, after all, was at least partially one of reducing causal characteristics to noncausal terms. And although it certainly seems correct that the relationship between Jay's driving and Myrtle's injury matches the intrinsic structure of S_J, while the relationship between Daisy's driving and Myrtle's injury does not match the intrinsic structure of S_D, we need to be able to explain exactly why this is. Hall sketches a framework for solving this problem,[82] but a more robust response may be required.

A second problem with Hall's solution — at least insofar as it incorporates a sufficiency theory of causation — is that it may fall victim to counterexamples of its own. These counterexamples are more ob-

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[76] *See* Hall, *supra* note 50, at 262–63.

[77] Hall, *supra* note 18, at 286.

[78] *See id.* at 286–90.

[79] *Id.* at 287; *see also* PAUL & HALL, *supra* note 43, at 131.

[80] *See* Hall, *supra* note 18, at 287.

[81] *Id.* ("It would be disappointing if we could say nothing about what makes for similarity in relevant respects; for many, leaving this notion unexplained would give the *Intrinsicness* thesis a 'whatever it takes' cast that would smack of triviality."). This line of criticism echoes the arguments leveled against Wright's concept of causal sufficiency. *See supra* note 58.

[82] *See* Hall, *supra* note 18, at 288–90. Hall's basic approach is to begin with a given structure S and to imagine the myriad ways in which its intrinsic characteristics might be changed to create a new structure S′. *Id.* at 288. Furthermore, Hall stipulates, in imagining any new structure S′, we must restrict ourselves by making sure that there is "some non-arbitrary way of imposing a one–one map from the parts of [S′] to the parts of [S]." *Id.* Once we have imagined all the possible ways in which S can be changed while observing this restriction, we will have what Hall calls a "blueprint-class." *Id.* at 289. The members of this class, in turn, will all share those intrinsic characteristics that are required in order to establish a match with S, but may differ with respect to those intrinsic characteristics that are not. *Id.*

scure than traditional overdetermination and preemption cases, but they are important to consider nonetheless. To illustrate one such case, we may construct a sort of hybrid of the overdetermination and preemption scenarios discussed above.[83] In this scenario, we may assume that Jay and Daisy are driving toward the intersection and that both are on trajectories to hit the hapless Myrtle. At time t_1, Jay is crawling toward Myrtle at a pace of five miles per hour, while Daisy is coming in hot at a speed of twenty. At time t_2, Daisy sees Jay and slows to five miles per hour, while Jay maintains his speed. Both fail to see Myrtle, however, and they simultaneously hit her, breaking her leg. We may assume further that if Jay or Daisy alone had hit Myrtle at a speed of five miles per hour, the impact would have been insufficient to break Myrtle's leg, whereas if Daisy alone had hit Myrtle at a speed of twenty miles per hour, the impact would have been sufficient.[84]

In this scenario, it seems that Hall's strategy will mistakenly exclude Jay's driving at t_1 as a cause of Myrtle's injury because Jay's driving will not be necessary to *any* set of sufficient conditions, let alone a *unique* set of sufficient conditions, for Myrtle's injury. Instead, any set of sufficient conditions at t_1 will have to include Daisy (because Jay alone will not break Myrtle's leg if he continues at a speed of five miles per hour), and Jay will be unnecessary to the sufficiency of any such set (because Daisy alone will break Myrtle's leg if she continues at a speed of twenty miles per hour). The case is made even odder by the fact that Jay appears to *become* a cause of Myrtle's injury at t_2, since Jay and Daisy at that point are jointly sufficient, but individually insufficient, for Myrtle's injury (since both drivers at t_2 are going only five miles per hour). In order to resolve these issues, the sufficiency theorist will likely have to clarify or revise her account; while Hall is confident that such tweaks are possible,[85] a healthy degree of skepticism is warranted in their absence.[86]

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[83] The following example is inspired by an abstract diagram in PAUL & HALL, *supra* note 43, at 130 fig.15.

[84] As in the discussion of fine-grained events above, *see supra* notes 26–29 and accompanying text, one might object that the injury Myrtle sustains when hit by both cars is not the *same* injury that she would have sustained had she been hit only by Daisy. As above, however, we can easily revise the scenarios such that the injuries in each are indistinguishable.

[85] PAUL & HALL, *supra* note 43, at 130.

[86] One possible solution may be to assume as a foundational matter that causation is transitive, in which case Jay's driving at t_1 *will* be a cause of Myrtle's injury, because Jay's driving at t_2 is a cause of Myrtle's injury (as discussed above), and Jay's driving at t_1 is a cause of Jay's driving at t_2. While causation's transitivity certainly seems intuitive, *see* Ned Hall, *Causation and the Price of Transitivity*, 97 J. PHIL. 198, 198 (2000) ("That causation is, necessarily, a transitive relation on events seems to many a bedrock datum, one of the few indisputable a priori insights we have into the workings of the concept."), it is not self-evident. Counterfactual dependence, after all, is notoriously nontransitive. For an illustration that has become unfortunately topical, see MAUDLIN, *supra* note 44, at 27 ("If the Earth had exploded in 1987, Ivana would not have found out about Marla.

The upshot of the foregoing discussion is that sufficiency accounts carry significant promise, particularly in their ability to handle overdetermination cases (and to accurately account for the causal status of preempt*ing* causes). Furthermore, the incorporation of the intrinsicness thesis may enable sufficiency theories to resolve some of their thorniest issues, including those presented by preempt*ed* events and noncausal relationships. Such a strategy, however, will have to address several lingering questions, such as the exact nature of an intrinsic match and the proper resolution of the obscure counterexamples discussed above.

C. A Brief Return to Counterfactual Accounts

In light of the previous section, the reader might be wondering: can counterfactual theories invoke the intrinsicness thesis as well? Indeed, if we return to the objections discussed in Part I, it looks as though intrinsicness applies equally to conventional accounts of but-for causation. As this section will illustrate, however, while intrinsicness does appear at first to yield benefits for counterfactual analyses, it turns out, upon further examination, that intrinsicness and counterfactual accounts are fundamentally inconsistent.

Beginning with the criticism that counterfactual analyses accord causal status to noncausal relationships,[87] it seems at first that we can formulate a similar response to the one we articulated in the sufficiency context.[88] To illustrate, if we return to the counterfactual version of the coffee scenario,[89] we can try to build a blueprint S where E is the event of Nick making coffee later in the day and C is the event of Jay driving negligently at time t. As in the sufficiency case, we will not have to add C to S, because it is not true at t that Nick's making coffee is counterfactually dependent on Jay's driving negligently (because by the time we reach t, the conditions will already be in place for Nick to make the coffee, and these conditions will be unaffected by the presence or absence of Jay's negligence). It is irrelevant that Jay's negligent driving is necessary for his earlier failure to make coffee, which is in turn necessary for Nick's making coffee later in the day, because S is a contained causal structure spanning from C to E, and the relationships involving Jay's failure to make coffee occur prior to C.[90]

Similarly, in the overdetermination and preemption cases, the intrinsicness thesis appears to offer a ready-made response: We can

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If Ivana had not found out about Marla, Trump would be a happier man now. In normal contexts both of these are true. It does not follow that if the Earth had exploded, Trump would be happier.").

87 *See supra* p. 2169.

88 *See supra* p. 2176.

89 *See supra* pp. 2169–70.

90 *See supra* p. 2176.

look at the garden-variety cases in which Jay alone drives into Myrtle, and in which Daisy alone drives into Myrtle, and we can build corresponding blueprints S_J and S_D.[91] As in the sufficiency example, Jay's driving will be included in S_J, and Daisy's driving will be included in S_D, because either would have been a but-for cause in the absence of the other.[92] Furthermore, S_J will match the intrinsic structure of the relationship between Jay's driving and Myrtle's injury in both the overdetermination and the preemption cases, while S_D will match the intrinsic structure of the relationship between Daisy's driving and Myrtle's injury only in the overdetermination case. We will thus get the intuitive result that both Jay and Daisy are causes of Myrtle's injury when they simultaneously collide, but that only Jay is a cause of Myrtle's injury when Daisy watches from afar.

Unfortunately, the initial promise just discussed vanishes once we note that there is a fundamental inconsistency between the intrinsicness thesis and counterfactual accounts of causation.[93] More specifically, on a counterfactual account of causation, the causal structure of two processes can differ even when the two processes are intrinsically identical. To illustrate, we can return to a modified version of the preemption case: We may suppose, as in the original scenario, that Jay drives negligently into Myrtle, while Daisy slows down and watches from afar. Unlike in the original scenario, however, we may suppose further that Daisy would not have hit Myrtle if she had maintained her speed. Instead, if Daisy had kept driving, Jay would have become distracted, such that he swerved, thereby missing Myrtle and leaving her unscathed. On the counterfactual account, Daisy's slowing down is a cause of Myrtle's injury, because Myrtle would not have been injured had Daisy maintained her speed and distracted Jay.

The problem is that we can construct a scenario with an identical intrinsic structure to the one just described (Jay drives negligently into Myrtle while Daisy slows down and watches from afar), in which Daisy's slowing down is *not* a cause of Myrtle's injury: We may suppose, for example, that if Daisy had kept driving, Jay would not have become distracted; instead, Jay would not even have noticed Daisy, and he would have hit Myrtle all the same. Daisy's slowing down, in this version, is not a cause of Myrtle's injury, even though the scenario is intrinsically identical to the one in which Daisy's slowing down *is* a cause of Myrtle's injury (the two scenarios are identical because they differ only in what *would have* happened had things been different).

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[91] *See supra* pp. 2177–78.

[92] In other words, had Daisy been absent and Jay alone driven into Myrtle, it would have been true that Myrtle would not have been injured but for Jay's driving (and vice versa).

[93] *See* PAUL & HALL, *supra* note 43, at 196–97; Hall, *supra* note 18, at 279–83.

Here the counterfactual theorist may respond that the two scenarios are not in fact intrinsically identical, because there must be some relevant difference (in Jay's level of attention, for example) between the case in which Jay would have noticed Daisy and the case in which he would not have noticed her. Such responses are unavailing, however, because we can easily modify the scenarios such that they differ only with respect to some clearly extrinsic factor. We might imagine, for example, that in the scenario in which Jay would have noticed Daisy, it is because a bystander, upon seeing Daisy enter the intersection, would have called out to him; given that Daisy actually slowed down, however, the bystander remained silent.[94] Instead, it seems that counterfactual accounts are committed to the position that causal structures are not determined by the intrinsic natures of events and their relationships. These accounts are thus unable to access the full range of solutions invoked above by the sufficiency theorist.[95]

III. CONCLUSION

In tort law, the concept of actual causation tends to be understood in simple, counterfactual terms. Although courts and commentators acknowledge that this counterfactual analysis breaks down in certain corner cases,[96] they tend to embrace it as a generally accurate account.[97] This Note departs from mainstream complacency with but-for causation, exploring possible alternatives. Particularly promising is the family of theories that defines causation in terms of an event's (or set of events') sufficiency in bringing about a given result. Such theories, when combined with an intrinsic view of causal structure, appear capable of resolving issues that counterfactual accounts cannot. Although sufficiency and intrinsicness face objections and counterexamples of their own, they may supply the foundation of a metaphysically accurate picture of actual causation.

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[94] Hall gives a similar example in which one fighter pilot shoots down a second fighter pilot, and in which a third fighter pilot bombs an enemy target. Hall, *supra* note 50, at 241. If the second fighter pilot was about to receive instructions to shoot down the third fighter pilot, then the first fighter pilot is a cause of the bombing on a counterfactual account. *Id.* at 244. If, however, the second fighter pilot was not about to receive instructions to shoot down the third fighter pilot, then the first fighter pilot is not a cause of the bombing. *Id.* at 245. These two scenarios are intrinsically identical — because the first pilot shoots down the second pilot before the second pilot would or would not have received the instructions — and yet their causal structures differ. *Id.*

[95] The counterfactual theorist may still be able to address objections regarding noncausal relationships by relying on the non-backtracking arguments discussed above, *supra* pp. 2170–71, although these arguments, as noted, would require the counterfactual theorist to accept the existence of "small miracle[s]," Lewis, *supra* note 46, at 560. Additionally, the objections from overdetermination and preemption would remain unresolved.

[96] RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 27 reporters' note cmt. a (AM. LAW INST. 2005).

[97] *Id.* § 26 reporters' note cmt. b.