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Recommended Citation

David A. Fischer, *Insufficient Causes*, 94 Ky. L.J. 277 (2006)

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Insufficient Causes

*David A. Fischer*¹

I. INTRODUCTION

COURTS have long used the “but-for” test to determine causation in fact in tort cases. Unable to adequately deal with difficult cases such as those involving over-determined causes, the test has always required supplementation. Thus, in the last century, courts used the “substantial factor” test to complement the but-for test. Over the years, courts also used the substantial factor test to do an increasing variety of things it was never intended to do and for which it is not appropriate.² As a result, the test now creates unnecessary confusion in the law and has outlived its usefulness. The NESS (Necessary Element of a Sufficient Set) test of causation, popularized by Professor Richard Wright,³ is emerging as the new supplement to the but-for test for the twenty-first century. Momentum in favor of the NESS test is building. Indeed, several prestigious scholars now advocate some version of the NESS test,⁴ and the American Law Institute’s new Restatement (Third) of Torts: Liability for Physical Harm replaces the substantial factor test with a version of the NESS test.⁵ Much of the focus of twenty-first century causation scholarship will explore the strengths and weaknesses of the NESS test.

¹ James Lewis Parks Professor of Law, University of Missouri—Columbia. This article benefited greatly from the following: The comments of Liz Fischer, Michael Green, Chris Guthrie, Jane Stapleton, Richard Wright, and the participants in Jane Stapleton’s seminar on causation and responsibility at the University of Texas School of Law who read early drafts of the manuscript; workshops at the University of Missouri—Columbia and at the Research School of Social Sciences of the Australian National University; and research help from Michael Gardner. All mistakes, however, are mine. The work on this article was supported by a grant from the University of Missouri Law School Foundation.

² RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 26 cmt. j and Reporters’ Note cmt. j (Proposed Final Draft No. 1, 2005).

³ See Richard W. Wright, *Causation in Tort Law*, 73 CAL. L. REV. 1735 (1985) [hereinafter Wright, *Causation*].

⁴ See, e.g., Jane Stapleton, *Legal Cause: Cause-in-Fact and the Scope of Liability for Consequences*, 54 VAND. L. REV. 941 (2001) (Professor Stapleton’s version of the NESS test is the “targeted but-for test.”).

⁵ RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 26 cmt. c, § 27 cmts. f, i.

This article analyzes two types of tort cases that, because the tortious conduct is not “independently sufficient” to cause injury, present particularly perplexing causation-in-fact questions. The article evaluates the usefulness of the NESS test for resolving these questions.

By “independently sufficient,” I refer to situations where there is more than one causal force of interest, each sufficient in the absence of the other to produce the result. For example, each of two fires is independently sufficient to destroy a building if each would have destroyed the building in the absence of the other fire. Keep in mind, however, that although each of two causal forces (such as the fires) may be sufficient in the absence of the other, all causes (including the fires) are dependent on other existing factors without which the injury would not occur. A fire, for example, is dependent on fuel and oxygen to continue burning. A fire, therefore, can be sufficient to cause harm in the absence of another fire, but it cannot be sufficient to cause harm in the absence of other factors such as fuel, oxygen, wind, and the absence of a downpour. Therefore, I use the phrase “independently sufficient” in the limited sense of being sufficient in the absence of the other cause of interest. I use “insufficient” contribution to injury to refer to contributions not “independently sufficient” to cause injury in the absence of the contribution of the other cause of interest. An “insufficient” contribution to injury is sufficient to cause injury only when combined with some or all of the contribution of the other cause of interest. In this sense, a fire made an “insufficient” contribution to the destruction of a building only if it would have burned the building when combined with another fire. That is, heat from the first fire would not have ignited the building by itself but would ignite the building when combined with some (or all) of the heat supplied by the second fire.

The first problem case that this article analyzes involves forces or conditions neither necessary nor independently sufficient to produce plaintiff's injury. The difficult question is whether such forces caused the injury. The following hypothetical illustrates the problem:

Stream Pollution

Two actors independently and simultaneously discharge pollution into a stream. Actor X discharges twenty-five units of pollution and actor Y discharges one unit. The combined pollution kills plaintiff's cow that drank from the stream. A minimum of fifteen units of pollution were necessary to kill the cow.⁶

Clearly, actor X killed the cow. Has actor Y also killed the cow? Should our view of Y's causal contribution change if she were one of twenty-six actors

⁶ This stream-pollution hypothetical is based on a variation of the facts in *Warren v. Parkhurst*, 92 N.Y.S. 725 (N.Y. Gen. Term 1904).

with each actor contributing one unit of pollution? In both cases, actor Y's pollution was insufficient and unnecessary to kill the cow.

Courts sometimes find insufficient and unnecessary contributions to be causal. At other times they do not. When should courts find such contributions causal? The question is important because there are numerous situations where actors make insufficient and unnecessary contributions to disastrous events. Injury caused by toxic substances is a prime example.

The second problem case in which causal forces lack independent sufficiency occurs with multiple omissions where no omission is independently sufficient to be a "but-for" cause of the resulting injury. For example, one actor fails to repair a car's defective brakes, and a second actor fails to apply the car's brakes, resulting in injury to a bystander because the car did not stop. As I explain later,⁷ in such cases each omission is insufficient to be a "but-for" cause of the result because the other omitted act was necessary for sufficiency. In this article, I refer to such omissions as "dependently sufficient causes." The omissions are "dependently sufficient" since their sufficiency depends on the existence of the other omitted act.⁸ These cases are surprisingly common with product liability failure-to-warn cases as the leading example. Professor Wright and I have joined issue concerning the appropriate analysis of these cases.⁹ My analysis reveals a key weakness of the NESS test: its inability to adequately identify when one potential cause preempts another.

This article first briefly reviews the operation of the basic tests for determining causation. It then analyzes the two problem cases.

II. BASIC TESTS OF CAUSATION

A. The "But-For" Test

The predominant test for causation is the "but-for" test, a test of necessity. It finds that damage is caused by an act or omission if the damage would not have occurred at the time it occurred without the act or omission.¹⁰ For

⁷ See *infra* notes 112–14, 116–19, 134 and accompanying text.

⁸ I recognize this label is not ideal because, as pointed out above, all causes are dependent on other existing factors, without which the injury would not occur. The cases under consideration are distinguishable, however, because the sufficiency of the omissions in such cases is also dependent on the existence of a tortiously omitted act that did not occur. See *infra* notes 114–16, 118–21, 139 and accompanying text.

⁹ See David A. Fischer, *Causation in Fact in Omission Cases*, 1992 UTAH L. REV. 1335 (1992) [hereinafter Fischer, *Causation*]; Wright, *Causation*, *supra* note 3; Richard W. Wright, *Once More into the Bramble Bush: Duty, Causal Contribution, and the Extent of Legal Responsibility*, 54 VAND. L. REV. 1071 (2001) [hereinafter Wright, *Once More*].

¹⁰ *Busta v. Columbus Hosp. Corp.*, 916 P.2d 122, 139 (Mont. 1996).

example, a fire caused a house to burn down if the house would not have burned at the time it burned without the fire. Causation in such a case is not negated simply because the house would have been destroyed by another fire—or other force—at a later time.¹¹

In an exceptional situation, courts decline to apply the but-for test, holding tortfeasors liable whose conduct, unnecessary for the result, is not causal under the test. The situation arises when two actively operating forces concur, each independently sufficient to cause the injury.¹² The “two fires” case, set out below, is a classic example:

Two Fires

X and Y each light separate fires that merge into a single fire. The merged fire burns down plaintiff's house.

Here, application of the “but-for” test would exonerate both X and Y if each fire were large enough to burn the house by itself. X's fire was not causal. Even in the absence of X's fire, the house would have been burned by Y's fire. Y's fire is also not a but-for cause since, in the absence of Y's fire, X's fire would still have burned the house. Courts have dealt with this logical dilemma by not applying the but-for test and holding both tortfeasors liable.¹³

Courts often impose liability in such cases by applying the “substantial factor” test as an alternative for the but-for test.¹⁴ This alternative test requires a finding that the tortious conduct was a substantial factor in producing the result as the basis for proving causation.¹⁵ The test offers no real

11 *Dillon v. Twin State Gas & Elec. Co.*, 163 A. 111 (N.H. 1932). In *Dillon*, a defendant who negligently electrocuted a boy was deemed to have caused his death even if the jury were to find that, if he had not been electrocuted, he would have fallen to his death shortly after the time of the electrocution. The boy's probable future death by falling was, however, a basis for reducing the damages caused by electrocution. *Id.* at 114–15. For a discussion of the relevance of the other forces in reducing the damages the tortfeasor has to pay, see David A. Fischer, *Successive Causes and the Enigma of Duplicated Harm*, 66 TENN. L. REV. 1127 (1999) [hereinafter Fischer, *Duplicated Harm*].

12 See RESTATEMENT (SECOND) OF TORTS § 432(2) (1965) (stating the rule).

13 See, e.g., *Basko v. Sterling Drug, Inc.*, 416 F.2d 417, 429–30 (2d Cir. 1969) (holding that the trial court should have instructed the jury on causation using the “substantial factor” test); *Koenig v. Babka*, 682 S.W.2d 96, 99 (Mo. Ct. App. 1984); *Kingston v. Chicago & Nw. Ry. Co.*, 211 N.W. 913, 915 (Wis. 1927).

14 See, e.g., *Basko*, 416 F.2d at 429–30; *Thomsen v. Rexall Drug & Chem. Co.*, 45 Cal. Rptr. 642, 647 (Cal. Dist. Ct. App. 1965); *Kyriss v. State*, 707 P.2d 5, 8–9 (Mont. 1985). The Restatement (Second) of Torts adopted the substantial factor test, and applies it in all cases, including those where there is causation under the but-for test. RESTATEMENT (SECOND) OF TORTS §§ 431–32 (1965). It provides that, with one exception, conduct cannot be a substantial factor unless it is also a but-for cause. The exception applies where there are two actively operating forces, each of which is sufficient to bring about the result. *Id.* § 432.

15 *Basko*, 416 F.2d at 429; *Thomsen*, 45 Cal. Rptr. at 647.

guidance for determining when a factor is substantial or even a “factor.” Courts and juries must rely on intuition to decide the issue.

Courts and scholars frequently explain the exception to the but-for test as applying when the competing forces are independently sufficient to cause the injury.¹⁶ Accordingly, the exception apparently becomes relevant only in the case of “multiple sufficient causes.”¹⁷ In the example, each fire is independently sufficient to cause the injury since it would burn the house in the absence of the other fire. Under this view, a force is causal either if it is necessary (meets the but-for test) or is independently sufficient for the harm (sufficient in the absence of the other cause of interest), but an unnecessary and insufficient force contributing to harm is not causal. In the stream pollution case, therefore, actor Y’s unit of pollution was not a cause of the cow’s death because it was neither necessary nor independently sufficient to kill the cow. One version of the NESS test of causation also finds that Y’s unit of pollution did not kill the cow. Another version of the NESS test finds the opposite on the basis that an unnecessary and insufficient contribution to harm is causal. Where the latter view prevails, the exception from the but-for requirement is more accurately described as involving “overdetermined causes”¹⁸ rather than “multiple sufficient” causes because Y’s pollution was insufficient.

B. The “NESS” Test

NESS stands for “Necessary Element of a Sufficient Set.” Hart and Honoré originated the test;¹⁹ Professor Wright elaborated on it. The test is a real contribution to legal analysis. It provides an extremely helpful way of conceptualizing the nature of causal problems, and it offers a rational process for identifying causes in overdetermined-cause cases.

In his landmark 1985 article, Professor Wright described the NESS test as follows: “[A] particular condition was a cause of (condition contributing to) a specific consequence if and only if it was a necessary element of a set of antecedent actual conditions that was sufficient for the occurrence of the consequence.”²⁰ The test resolves the two fires hypothetical by finding both fires caused the injury because “[e]ach fire was necessary for the sufficiency of a set of actual antecedent conditions that did not include the

16 *E.g.*, W. PAGE KEETON ET AL., PROSSER AND KEETON ON TORTS § 41, at 266, 268 (5th ed. 1984).

17 See ALEXANDER PECZENIK, CAUSES AND DAMAGES 15 (1979) (employing “multiple sufficient cause” terminology); see generally Fischer, *Causation*, *supra* note 9.

18 Wright, *Causation*, *supra* note 3, at 1777.

19 See generally H.L.A. HART & TONY HONORÉ, CAUSATION IN THE LAW (2d ed. 1985).

20 Wright, *Causation*, *supra* note 3, at 1790.

other fire.”²¹ Professor Wright emphasizes that the set must be comprised of “existing *antecedent* conditions.”²²

Professor Wright uses the two fires case to illustrate the necessity of independently sufficient conditions that have not been counteracted by positive or negative conditions. He states:

The NESS test can be used, and implicitly is used, to confirm the independent sufficiency of each fire in cases such as *Kingston*, in which the two large fires merged to burn down the plaintiff’s house. Each fire was necessary for the sufficiency of a set of existing antecedent conditions that contained it but not the other fire. The two sets overlap to a considerable extent, since they share such existing necessary conditions as oxygen, fuel to burn on the route to the house, lack of a downpour, the fire’s reaching the house while there is still a house left to burn, etc. Since the set containing each fire was fully instantiated, the two fires are duplicative causes of the destruction of the plaintiff’s property.²³

III. THE FIRST PROBLEM CASE: UNNECESSARY AND INSUFFICIENT CONTRIBUTIONS

A. *Theory*

Consider the variation of the stream pollution hypothetical set out above where each of twenty-six actors contributes unnecessary and insufficient amounts of pollution to kill the cow. Hart and Honoré, the originators of

²¹ *Id.* at 1791.

²² Wright, *Once More*, *supra* note 9, at 1105 n.116 (emphasis added). In this article Professor Wright discusses the sense in which he uses the term “antecedent.”

[Honoré] describes his version of the NESS test as being only “marginally different” than my version, insofar as I might require that there be a time gap between each antecedent condition and the consequent, rather than allowing, as he does, at least some of the antecedent conditions to persist to the time when the consequent occurs. I did not mean to exclude such persistence, or even (the theoretical or science-fiction possibility of) backward-in-time causation, although it is useful and in accord with practical reality to think of the word “antecedent” in the NESS test in terms of temporal priority (which does not exclude but rather often assumes persistence of the temporally prior condition up to and even beyond the time that the consequent occurs). What I mean to emphasize by the word “antecedent” is that the condition appears in the antecedent (“if” part) of the causal law or generalization, rather than in the consequent (“then” part).

Id.

²³ Wright, *Once More*, *supra* note 9, at 1104 (citing *Kingston v. Chicago & Nw. Ry. Co.*, 211 N.W. 913 (Wis. 1927)).

the NESS test, apparently would not find insufficient contributions to be causal.²⁴ Professor Wright modified the NESS test in such a way as to find them causal. He explains in the following passage:

[T]he NESS test explains and justifies our common judgment in the *Warren* case that each of the twenty-six defendants' independent discharges of sewage was a cause of (contributed to) the destruction of the downstream plaintiff's use of his property, even though each individual's discharge by itself was "merely nominal" and would not have resulted in any injury to the plaintiff. Clearly, no individual defendant's discharge was independently sufficient for the occurrence of the plaintiff's injury. Although it is not explicitly stated by the court, it also seems clear that no individual defendant's discharge was necessary for the occurrence of the plaintiff's injury. Yet each defendant's discharge was a NESS condition. Some total number of discharges, N , where N is much greater than one but less than twenty-six, was necessary and sufficient for the plaintiff's injury. Each defendant's discharge was necessary for the sufficiency of a set of existing antecedent conditions which includes $N-1$ of the other defendants' discharges, and the sufficiency of that set was not preempted, but rather was reinforced, by the $26-N$ other defendants' discharges that were not included in the description of the sufficient set.

As a matter of empirical causal contribution, the analysis should not and would not change if there were only two defendants, one of whom produced N of the discharges (the necessary and sufficient amount), and the other of whom produced the remaining $26-N$. The first defendant's N discharges were independently sufficient. The second defendant's $26-N$ discharges would also be independently sufficient if N is thirteen or less. If N is greater than thirteen (e.g., fifteen), the second defendant's $26-N$ (e.g., eleven) discharges were necessary for the sufficiency of a set of existing antecedent conditions which includes, in addition to the second defendant's $26-N$ (e.g., eleven) discharges, $N-(26-N)$ (e.g., four) of the first defendant's discharges. Again, the sufficiency of this set was not preempted but rather was reinforced by the $N-(N-(26-N))$ (e.g., eleven) of the first defendant's discharges that were not included in the description of the sufficient set.

A non-numerical way of presenting the analysis in the preceding paragraph is to describe the minimally sufficient set containing the second defendant's total discharge as a set which also contains a total discharge by the first defendant "at least large enough" to ensure that the antecedent of the applicable causal generalization is fully instantiated. Given this description of the first defendant's total discharge, the second defendant's total discharge was necessary for the sufficiency of the set and thus is a NESS condition. Again, the portion of the first defendant's total discharge that is left out of

24 HART & HONORÉ, *supra* note 19, at 123–24, 125, 206–07, 235–39, 245, 249.

this description did not preempt, but rather reinforced, the sufficiency of the described set. The same method of analysis can be used to establish that the defendant's fire in *Anderson* and each of the two defendants' noisy motorcycles in *Corey* were, if not independently sufficient conditions, nevertheless still NESS conditions for the occurrence of the plaintiff's injury in each of those cases. This analytic method is not a verbal trick or sleight-of-hand. The description of the competing fire as a fire "at least" so big or of the competing motorcycle noise as "at least" so loud is a factual description of an antecedent condition that was concretely instantiated on the particular occasion.²⁵

To state the theory in a nontechnical way, an unnecessary and insufficient force or condition is a cause of injury if it joins with other forces or conditions to contribute to an injury. In the stream-pollution hypothetical, all the units of pollution mixed together equally aiding the cow's death by poisoning although no unit individually hastened the death of the cow.

B. Case Law

There indeed are some cases in which courts impose liability on actors who make insufficient and unnecessary contributions to an injury. *Warren v. Parkhurst* (involving stream pollution), described above by Professor Wright,²⁶ is an example but not a pure example. *Warren* was a nuisance case involving both causation of injury and causation of harm. The Restatement (Second) defines "injury" as the "invasion of any legally protected interest of another."²⁷ It defines "harm" as "loss or detriment in fact of any kind to a person resulting from any cause."²⁸ Consequently, injury can occur without harm (a transitory trespass), and harm can occur without injury (a loss of profits due to a business downturn).²⁹ *Warren* is not a pure example because, while the contribution of each defendant was not sufficient to cause injury (the nuisance), it apparently was necessary to cause some harm (suffering due to stench).

In *Warren*, the injury was the nuisance which required a fixed threshold of stench to be actionable. No tortfeasor's contribution was either necessary or independently sufficient to cause the nuisance. The fixed threshold of stench was not reached by any one discharge of sewage, but it was ex-

25 Wright, *Once More*, *supra* note 9, at 1106-07. The three cases mentioned here are *Warren v. Parkhurst*, 92 N.Y.S. 725 (N.Y. Gen. Term 1904); *Anderson v. Minneapolis, St. Paul & Sault Ste. Marie Ry. Co.*, 179 N.W. 45 (Minn. 1920), *overruled in part by Borsheim v. Great N. Ry. Co.*, 183 N.W. 519 (Minn. 1921); and *Corey v. Havener*, 65 N.E. 69 (Mass. 1902).

26 *See supra* note 25 and accompanying text.

27 RESTATEMENT (SECOND) OF TORTS § 7(1) (1965).

28 *Id.* § 7(2).

29 *Id.* § 7 cmt. a.

ceeded by the combined discharges. Each tortfeasor's discharge was necessary, however, for some of plaintiff's harm because each discharge increased the stench created by the other discharges. The plaintiff's harm was variable not fixed (i.e., the greater the stench the greater the suffering). The court appeared to recognize that no defendant's contribution was sufficient to cause the injury (the nuisance) but each contribution was necessary to cause some harm (suffering). The court said:

The only injury to the plaintiff arises from the foulness of the stream at his place. No one defendant caused that injury; all of the defendants did cause it. ... All of the defendants may be enjoined, and if the question of damages is urged a reference may be had to determine what damage has been caused by each defendant.³⁰

Pure examples of liability based on unnecessary and insufficient contributions are cases permitting recovery for fixed harm. In *Tidal Oil Co. v. Pease*,³¹ some tortfeasors polluted one stream with saltwater and other tortfeasors polluted another stream with saltwater. Plaintiff's cattle drank water from both streams and died. Apparently no evidence was presented as to the amount of water each cow drank from each stream. Plaintiff sued the tortfeasors who polluted one of the streams. The court held defendants liable for the entire harm.³² The opinion reasoned as follows: each defendant's negligence "combined" with the negligence of other tortfeasors to cause a "single injury," and each was liable for the injury even though his act alone "might not have caused it."³³ The opinion did not require the defendants' discharge of pollution to be necessary to kill the cows. It also did not suggest the existence of any evidence supporting a finding of necessary contribution by each defendant. Thus, defendants would be liable for the death of a cow who took only an innocuous sip of water from a stream the defendants polluted, though the sip may not have altered the time or manner of death. The harm in *Tidal Oil* is fixed. Once the cow drank a fatal dose of saltwater, any additional intake of saltwater did not increase the harm caused by the cow's death. Each defendant could be liable even though his pollution was neither necessary nor independently insufficient to cause the death of any cow.³⁴

30 *Warren v. Parkhurst*, 92 N.Y.S. 725, 728 (N.Y. Gen. Term. 1904). *Warren* did not state which party had the burden of proof with respect to apportioning damages. The modern trend is to place the burden of proof on defendants to apportion damages. This approach holds defendants liable for all harm if they cannot apportion. *Michie v. Great Lakes Steel Div., Nat. Steel Corp.*, 495 F.2d 213, 218 (6th Cir. 1974).

31 *Tidal Oil Co. v. Pease*, 5 P.2d 389 (Okla. 1931).

32 *Id.* at 390, 393.

33 *Id.* at 391.

34 *See also Northup v. Eakes*, 178 P. 266 (Okla. 1918). In *Northup*, numerous tortfeasors discharged crude oil into a stream running through plaintiff's property. The oil caught fire and

Other cases also impose liability based on possibly unnecessary and insufficient contributions to injury or harm. These cases involve such things as two floods uniting to damage property,³⁵ two fires uniting to damage property,³⁶ two loud noises uniting to cause an accident by frightening a horse,³⁷ multiple exposures to asbestos uniting to cause disease,³⁸ and reliance on a fraudulent misrepresentation uniting with other motives to cause plaintiff to enter into a disadvantageous business transaction.³⁹

There are, however, other similar cases that appear inconsistent with the cases described above. They impose liability for contributing to injury or harm only if the contribution is either necessary or independently sufficient to produce the injury or harm. These cases involve such things as multiple discharges of smoke and fumes uniting to cause a nuisance,⁴⁰ two fires uniting to damage property,⁴¹ multiple servings of alcohol uniting to cause intoxication resulting in an accident,⁴² reliance on a fraudulent misrepresentation uniting with other motives to cause plaintiff to enter into a disadvantageous business transaction,⁴³ wrongful inducement to breach a

burned plaintiff's barn. Plaintiff sued some of the tortfeasors but not others. The court held each defendant liable for the entire damage because his act "combined" to cause a single injury even though his act "alone might not have caused it." *Id.* at 268. The opinion did not require defendants' pollution to be necessary for a fire that would have destroyed plaintiff's barn. *Id.*

35 Slater v. Mersereau, 64 N.Y. 138 (N.Y. 1876).

36 Anderson v. Minneapolis, St. Paul & Sault Ste. Marie Ry. Co., 179 N.W. 45 (Minn. 1920), *overruled in part by* Borsheim v. Great N. Ry. Co., 183 N.W. 519 (Minn. 1921).

37 Corey v. Havener, 65 N.E. 69 (Mass. 1902).

38 Tragarz v. Keene Corp., 980 F.2d 411 (7th Cir. 1992); Spaur v. Owens-Corning Fiberglass Corp., 510 N.W.2d 854 (Iowa 1994).

39 Nails v. S & R, Inc., 639 A.2d 660 (Md. 1994) (reliance on fraudulent misrepresentation concerning size of sales commission and reliance on other accurate representations induced plaintiffs to enter into employment contract with defendant); Horton v. Tyree, 139 S.E. 737 (W. Va. 1927) (reliance on fraudulent misrepresentations and on a guarantee induced plaintiff to buy coal stock).

40 Bollinger v. Am. Asphalt Roof Corp., 19 S.W.2d 544, 552 (Mo. Ct. App. 1929) ("If there was enough of smoke and fumes definitely found to have come from defendant's plant to cause perceptible injury to plaintiffs, then the fact that another person or persons also joined in causing the injury would be no defense; and it was not necessary for the jury to find how much smoke and fumes came from each place.").

41 Kingston v. Chicago & Nw. Ry. Co., 211 N.W. 913 (Wis. 1927); Cook v. Minneapolis, St. Paul & Sault Ste. Marie Ry. Co., 74 N.W. 561 (Wis. 1898) (finding no liability where one fire is of innocent origin).

42 Fagan v. City of Vineland, 22 F.3d 1283, 1295-96 (3d Cir. 1994) (in regards to sale of wine to a minor in violation of dram shop act, holding "no jury could reasonably conclude that [the minor's] drinking of two gulps of wine ... sufficiently contributed to his intoxication to have been a cause of the accident.").

43 Engalla v. Permanente Med. Group, Inc., 938 P.2d 903, 919 (Cal. 1997) (Necessity required. Reliance on a fraudulent misrepresentation (concerning an arbitration clause in a health plan) and numerous other considerations unite to cause plaintiff's employer to adopt

contract uniting with other factors to cause a party to breach her contract with plaintiff,⁴⁴ and exposure to multiple toxins uniting to cause a disease.⁴⁵ *City of Piqua v. Morris*⁴⁶ is another example. Defendant negligently constructed a pond with inadequate drainage outlets so it would have overflowed in an ordinary flood and damaged plaintiff's property. The pond, however, was overwhelmed by a flood so large and unforeseeable that even properly constructed drainage outlets would not have prevented the overflow. The court found that the negligent construction did not cause the flood.⁴⁷ Yet the inadequate drainage is a NESS cause if the backup of water it produces is combined with just enough water to constitute a "normal" flood.⁴⁸

an employee health plan. Actual reliance occurs when a misrepresentation is "an immediate cause of [a plaintiff's] conduct, which alters his legal relations,' and when, absent such representation, 'he would not, in all reasonable probability, have entered into the contract or other transaction.'" (quoting *Spinks v. Clark*, 82 P. 45, 47 (Colo. 1905)); *Safford v. Grout*, 120 Mass. 20, 25 (Mass. 1876) (Necessity required. Reliance on defendant's fraudulent misrepresentation of a person's credit and on plaintiff's own inquiries about the person's credit. The appellate court approved an instruction telling the jury that if plaintiff would not have acted "except for the defendant's representations, then they could recover, although they were in part controlled by other influences, for which he was not responsible."); *Strong v. Strong*, 5 N.E. 799, 801 (N.Y. 1886) (Necessity required. Reliance on defendant's fraudulent misrepresentation and on misrepresentation of another person. Held:

It is not essential to a recovery in such an action that the alleged representations should have been the exclusive cause inducing the plaintiff to assent to the settlement, but if she would not have made the settlement except for such representations, there is such a reliance thereon as entitles her to maintain the action.)

44 *Mina Inv. Holdings Ltd. v. Lefkowitz*, 184 F.R.D. 245, 252 (S.D.N.Y. 1999) (Necessity required. Wrongful inducement unites with party's predisposition to breach contract.); *Gosden v. Louis*, 687 N.E.2d 481, 501 (Ohio Ct. App. 1996) (Necessity required. Wrongful inducement unites with party's dissatisfaction with the quality of plaintiff's work to cause party to fire plaintiff.).

45 *Bockrath v. Aldrich Chem. Co.*, 980 P.2d 398, 403 (Cal. 1999) (Sufficiency required. "The substantial factor standard is a relatively broad one, requiring only that the contribution of the individual cause be more than negligible or theoretical. Thus, a force which plays only an 'infinitesimal' or 'theoretical' part in bringing about injury, damage, or loss is not a substantial factor, but a very *minor force that does cause harm* is a substantial factor.") (emphasis added) (citation omitted). The directions for use of the California substantial factor jury instruction state that "but for" causation is usually required for conduct to be a substantial factor that contributes to harm. There is an exception. "The 'but-for' test does not apply to concurrent independent causes, which are multiple forces operating at the same time and independently, each of which would have been sufficient by itself to bring about the same harm." JUDICIAL COUNCIL OF CAL. CIVIL JURY INSTRUCTIONS § 430 (2004).

46 *City of Piqua v. Morris*, 120 N.E. 300 (Ohio 1918).

47 *Id.* at 300, 303.

48 Richard W. Wright, *The Grounds and Extent of Legal Responsibility*, 40 SAN DIEGO L. REV. 1425, 1440 (2003) [hereinafter, Wright, *Grounds and Extent*].

C. Analysis

1. "Causation" or "Policy" as Basis for Liability?—Some cases find insufficient forces contributing to injury causal, some do not. How do we reconcile these two lines of authority? One line of cases could be the correct approach to causation and the other incorrect. Professor Wright holds this view, claiming that insufficient forces contributing to injury are always causal,⁴⁹ although they do not always give rise to liability due to policy considerations.⁵⁰ He claims his version of the NESS test (which combines insufficient conditions with other conditions to make a sufficient set) is correct and Hart and Honore's version of the NESS test (which apparently does not combine such conditions) is incorrect.⁵¹

I disagree with Professor Wright on this theoretical point. True, causation in most common tort cases presents a pure question of fact divorced from policy considerations. If we know a car hit a pedestrian and crushed his leg, we intuitively understand the causal relationship between the impact and the injury. Our understanding is based on common knowledge about how physical forces operate in the world. We do not need to be told about a formal "test" of causation for us to reach our conclusion. Science does not create the tests of causation courts use. Courts and scholars devise these tests to implement their views of how to resolve causal questions. Those views are based either on intuition (or common understanding) about causation, policy considerations, or a combination of both factors. The tests we devise work remarkably well, permitting us to objectively determine causation (by simply applying the test) in the great majority of cases where there is widespread agreement about causation such as those involving the simple operation of physical forces. Yet the large variety of contexts in which causation issues arise make the tests imperfect, sometimes causing undesirable results when applied mechanically. Not all causation questions are restricted to the simple operation of physical forces. Particularly difficult cases arise at the boundaries of preemption and overdetermined harm where competing physical forces are at work. These cases cannot be resolved merely by observing the forces. Here, conclusions about causation require judgments about which forces should be valued and which forces should be ignored. In such cases courts should not reduce causation in fact to a pure question of fact by applying a mechanical test. Here it is impossible to create a mechanical test of causation to invariably reach desirable results.

49 Wright, *Once More*, *supra* note 9, at 1106–07.

50 Wright, *Grounds and Extent*, *supra* note 48, at 1449–50.

51 Wright, *Once More*, *supra* note 9, at 1104–07.

Professor Wright believes the “basic concept of causation, which we all intuitively employ, is formalized in the NESS test.”⁵² Yet he offers no empirical evidence, nor does he claim, that in all contexts, intuition generally leads to the belief that insufficient forces contributing to injury are causal. I believe cases involving insufficient forces contributing to injury are hard cases on the periphery where there is no core understanding of causation. Intuition varies as the context varies with respect to these very difficult cases.

Because these cases fall outside the core understanding of causation, courts should decide whether to impose liability on parties who make unnecessary and insufficient contributions to injury by making judgments based on either policy or intuition rather than on facts alone. In such cases, the NESS test helps us visualize the nature of the problem, but it does not help us make the underlying intuitive and value judgments that should dictate the result. A court finding causation can articulate its conclusion in terms of set theory by explaining how it aggregated forces in order to construct a sufficient set. A court finding no causation can articulate its decision by explaining how it did not aggregate forces. While set theory helps the judge explain her decision, it does not help her decide whether to aggregate forces.

Set theory does not require courts to be consistent. A court using the NESS test could sometimes aggregate forces to construct a sufficient set, while at other times decline to aggregate forces. For example, courts frequently exonerate parties who make trivial insufficient contributions to injury.⁵³ A court articulating such a decision in causal terms could explain a trivial contribution as not causal based on it not being a “substantial factor” in producing the result; therefore, it should not be combined with other forces to make a sufficient set. On the other hand, the court could aggregate forces when it believed the contribution was substantial.

Courts that want to be consistent in the way they apply the NESS test can still retain great flexibility by using another doctrine such as proximate cause as the vehicle for distinguishing cases. The proximate cause rationale for exonerating parties who make trivial contributions could be, for example, that while there is causation in fact (because the court always aggregates insufficient forces to make sufficient sets), there is no liability for trivial contributions to injury as a matter of proximate cause.

The new Restatement employs a two-part approach similar to the one described in the preceding paragraph. First, with some exceptions discussed below, it finds insufficient forces causal by aggregating them with

52 Wright, *Grounds and Extent*, *supra* note 48, at 1441.

53 RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 36 (Proposed Final Draft No. 1, 2005).

other forces to construct sufficient sets.⁵⁴ Second, it uses a special scope of liability rule to exempt from liability parties who make “[t]rivial contributions to overdetermined outcomes.”⁵⁵ It splits the inquiry into two parts in order to preserve causation in fact as a “largely objective inquiry.”⁵⁶ The Reporters recognize that determining which contributions are trivial and insubstantial is “a normative one rather than a factual one”⁵⁷ based on “fairness, equitable-loss distribution, and administrative cost.”⁵⁸

Because the split is essentially arbitrary, splitting the normative inquiry from the factual inquiry can lead to absurd conclusions concerning causation. As further demonstrated in Part IV of this article, the really difficult causation decisions are almost always based on either intuitive judgments or value judgments incapable of being captured by a mechanical rule. The new Restatement correctly takes no position with respect to some of the more problematic results of inquiry splitting.

One problematic case is the Restatement example of a “negligently constructed dam which would have collapsed in an ordinary flood [but is] overwhelmed by a flood so large and unforeseeable that no dam would have controlled it.”⁵⁹ The Restatement recognizes that “the negligent construction of the dam could be characterized as [a cause] if one conceptualizes [it] as combining with something less than the actual events that occurred. Thus, a ... flood of normal proportions make[s] the ... dam [a] factual cause[.]”⁶⁰ While I question the relevance of intuition to this causal inquiry, my intuition tells me the negligence caused no injury at all as long as the dam did not collapse sooner than a properly constructed dam would have collapsed. The Restatement takes no position on whether the dam caused the flood damage since a finding of causation is not supported by the case law and may be counterintuitive.⁶¹

This restraint is wise. The flood example can be altered to produce increasingly implausible findings of causation. Suppose a party adds a teaspoon of water to a tsunami causing great destruction. An application of the NESS test concludes the party caused all the destruction in the vicinity of the teaspoon of water. It does this by aggregating the teaspoon of water, with just enough other water, to create an injury-causing set. Almost every item of damage would have its own unique set. Different amounts of water would be required for each set, as the minimal amount of water suffi-

54 *Id.* § 27 cmts. f, g, i.

55 *Id.* § 36 cmt. b.

56 *Id.*

57 *Id.* at Reporters' Note, cmt. b.

58 *Id.* at cmt. b.

59 *Id.* § 27 cmt. i.

60 *Id.*

61 *Id.*

cient to cause each distinct injury or harm would vary according to the size, strength, and location of the person or property harmed. Thus, hundreds of items of damage require hundreds of different sufficient sets. One could construct these sets by using the following process:

- 1) Determine what item of tsunami damage required the least water to occur; ascertain the least amount of water necessary to cause the damage; subtract one teaspoon of water from the amount; and add the remaining water to a set containing the teaspoon of water. The set is sufficient to cause the damage requiring the least water.
- 2) Keep adding water until the item of damage requiring the second-least amount of water would occur; subtract one teaspoon of water from that amount; and add the remaining water to a second set containing the teaspoon of water. The second set is sufficient to cause the damage requiring the second-least amount of water.
- 3) Repeat the process until all damage is accounted for.

The process establishes causation of all damage caused by the teaspoon of water. Yet, despite the remorseless logic of the NESS test, I find the concept of a teaspoon of water destroying a large hotel positively bizarre.

A second problematic case occurs where one tortfeasor makes a necessary and independently sufficient contribution to injury, and the other tortfeasor makes an unnecessary and insufficient contribution. The Restatement wisely takes no position on whether the insufficient contribution is causal.⁶² Suppose a utility company negligently maintains a utility pole with only enough strength to withstand a six-mile-per-hour automobile impact, whereas a sound utility pole would withstand a twelve-mile-per-hour impact. A car going sixty miles per hour knocks the pole over onto plaintiff. My intuition is that the weakness of the pole was not a cause of the injury as long as a sound pole would have been knocked over in exactly the same manner as the weak pole. Case law supports my view.⁶³ Yet, the NESS test can prove causation by creating a sufficient set including the weak pole plus eleven percent of the car's speed, i.e., a car going at least seven miles

⁶² *Id.* § 27 cmt. f.

For example, one actor's contribution may be sufficient to bring about the harm while another actor's contribution is only sufficient when combined with some portion of the first actor's contribution. Whether the second actor's contribution can be so combined into a sufficient causal set is a matter on which this Restatement takes no position and leaves to future development in the courts.

Id.

⁶³ See *Bernier v. Boston Edison Co.*, 403 N.E.2d 391, 399 (Mass. 1980); *Gibson v. Garcia*, 216 P.2d 119, 123 (Cal. Ct. App. 1950).

per hour.⁶⁴ Policy considerations discussed below suggest the tortfeasor who made the insufficient contribution should never be liable.⁶⁵

Even though the Restatement two-part approach is awkward at times, I agree with it for two practical reasons. First, I believe there are some (rather rare) situations where courts should impose liability on a party who made an insufficient contribution to injury. The Restatement causation analysis permits liability in these cases. Second, the Restatement approach facilitates its laudable objective of eliminating the “substantial factor” test from our jurisprudence. Courts deciding causation on the basis of whether an insufficient force is “trivial” are likely to continue to use the substantial factor test (or something very much like it). Courts always finding insufficient contributions to injury to be causal are more likely to abandon the substantial factor test. Furthermore, while the two-part procedure is strained at times, I doubt courts would frequently reach different results by employing this test rather than reasoning only in terms of causation. For these reasons, the Restatement’s use of scope of liability to decide when to impose liability for insufficient contributions is superior to an approach using causation to decide when to impose liability.

2. *When to Impose Liability?*—*a. One Tortfeasor.*—When should courts impose liability on wrongdoers who create forces that make unnecessary and insufficient contributions to injury or harm? The weakest cases for liability are those where all the other forces contributing to the injury are nontortious, such as when a defendant makes an insufficient contribution to a natural flood.⁶⁶ Neither of tort law’s two main objectives—corrective justice and deterrence—can be advanced by liability.

The desire to achieve corrective justice is a major objective of tort law.⁶⁷ Courts implement corrective justice by measuring damages as the compen-

64 The Reporters to the Restatement recognize that the utility company’s insufficient contribution is causal under the NESS test. See RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27, Reporters’ Note cmt. i (Proposed Final Draft No. 1, 2005) (citing *Bernier v. Boston Edison Co.*, 403 N.E.2d 391, 399 (Mass. 1980) as a contrary example).

65 See *infra* notes 66–100 and accompanying text.

66 See *City of Piqua v. Morris*, 120 N.E. 300, 303 (Ohio 1918).

67 Catharine Pierce Wells, *Tort Law as Corrective Justice: A Pragmatic Justification for Jury Adjudication*, 88 MICH. L. REV. 2348, 2350 (1990). Aristotle first advanced the “notion of corrective justice.” The objective is to nullify gains and losses that arise between persons when one person wrongfully injures the other. *Id.* at 2350, 2355. Many scholars in recent years have emphasized corrective justice as a rationale for tort law. See PHILOSOPHICAL FOUNDATIONS OF TORT LAW (David G. Owen ed., 1995); Ernest J. Weinrib, Symposium, *Corrective Justice and Formalism: The Care One Owes One’s Neighbors*, 77 IOWA L. REV. 403 (1992). Corrective justice scholars advocate widely divergent definitions of corrective justice. See Jules L. Coleman, *Moral Theories of Torts: Their Scope and Limits* (pts. 1 & 2), 1 LAW & PHIL. 371 (1982), 2 LAW & PHIL. 5 (1983) (developing “foundational” principles to be used to devise specific rules for resolving cases); George P. Fletcher, *Fairness and Utility in Tort Theory*, 85 HARV. L. REV. 537, 543–56 (1972) (claiming that reciprocity of risk is the basis for corrective justice); Ernest J.

sation necessary to put plaintiff in the position she would have occupied if the tortious conduct had not occurred.⁶⁸ Thus, they allow plaintiff to recover only for losses that would not have occurred “but for” the defendant’s tortious conduct. Damages are not required to achieve corrective justice in cases where defendant’s insufficient contribution to harm has not made plaintiff’s condition worse. Here, damages represent a windfall with plaintiff already occupying the position she would have been in had the tort not occurred.

The corrective justice measure of damages is nearly all-pervasive with courts using it with respect to both concurring causes and successive causes.⁶⁹ Courts go so far as to exonerate defendants from having to pay for harm that would have been duplicated by actual or potential future forces.⁷⁰ For example, a tortfeasor who permanently disables plaintiff only has to pay for one year of disability if plaintiff suffers a permanently disabling heart attack one year after the tortfeasor injured plaintiff.⁷¹

A major exception to the corrective justice measure of damages is the rule allowing full recovery from the sole tortfeasor in multiple sufficient cause cases where the other sufficient cause was nontortious.⁷² Such cases award plaintiff a windfall. The tort does not make plaintiff worse off when the innocent force duplicates both harm and injury.⁷³ Yet, plaintiff recovers full compensation for the loss. This exception is a huge aberration. The rare plaintiffs who recover under this exception are indistinguishable from the legion of plaintiffs who routinely fail to recover for harm duplicated by actual or potential innocent forces.⁷⁴

The other major objective of tort law—efficient deterrence⁷⁵—also cannot be advanced by imposing liability on a tortfeasor who made an insuf-

Weinrib, *Toward a Moral Theory of Negligence Law*, 2 LAW & PHIL. 37, 43 (1983) (using Kantian principles); Wells, *supra* at 2353 (advocating adoption of procedures that encourage juries to do justice in individual cases); see generally Richard A. Epstein, *A Theory of Strict Liability*, 2 J. LEGAL STUD. 151, 160–89 (1973) (contending that causation of harm is the basis for corrective justice).

68 Fischer, *Duplicated Harm*, *supra* note 11, at 1136.

69 *Id.* at 1136, 1147.

70 *Id.* at 1136.

71 *Id.* at 1153–55.

72 See *supra* notes 10–18 and accompanying text.

73 Fischer, *Duplicated Harm*, *supra* note 11, at 1164–65.

74 *Id.* at 1165.

75 Richard Posner first explained the tort system “in ... terms of economic analysis,” contending that efficient allocation of resources requires appropriate deterrence of accidents. Gary T. Schwartz, *Mixed Theories of Tort Law: Affirming Both Deterrence and Corrective Justice*, 75 TEX. L. REV. 1801, 1806 (1997); see also Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29, 32–33 (1972); Richard A. Posner, *Killing or Wounding to Protect a Property Interest*, 14 J.L. & ECON. 201, 209 (1971). Many other scholars have joined Posner in engaging in economic analyses of tort cases. See, e.g., STEVEN SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW* (1987);

ficient contribution to injury. There are two reasons why it is usually not efficient to impose liability on a party for an injury he could not have prevented. First, if the tortious conduct presents a risk of preventable injuries, the risk of liability for those injuries provides sufficient deterrence. Therefore, the added expense of litigating cases where the tortfeasor could not have prevented the injury is wasted since the litigation will not reduce the level of accidents. Second, holding tortfeasors liable for unpreventable accidents can lead to overdeterrence because the increased litigation costs, or the increased scope of liability, can induce the actor to take actions that do not optimize social welfare.⁷⁶

There is virtually no authority for holding a tortfeasor who makes an insufficient contribution liable where the other contributions were nontortious. Courts can impose liability only by expanding the rule permitting recovery where one of several multiple *sufficient* forces is innocent to include multiple *insufficient* innocent forces as well. That rule is so completely out of line with policy and precedent in analogous cases that courts should not expand it.

b. Multiple Tortfeasors.—The weakest case for holding the insufficient contributor liable where multiple tortfeasors are involved is one in which one or more of the other tortfeasors' contributions were either necessary or independently sufficient. *Gibson v. Garcia*⁷⁷ is an example. Defendant utility company negligently permitted its utility pole to become rotten. Defendant driver negligently drove into the pole knocking it over onto plaintiff. The court held that the utility company would not be liable if the collision would have knocked over a sound pole.⁷⁸ Yet, if the pole broke at the rotten place (rather than being knocked over entirely), the utility company's negligent maintenance contributed to the accident, even though the contribution was insufficient to cause the accident.⁷⁹ On the other hand, the driver's contribution was both necessary and independently sufficient for the accident if a sound pole would have broken at the same place due to the driver's force. Holding the driver liable promotes efficient deterrence because liability provides an incentive for him to invest in precautions that would have prevented the accident. Holding the utility company liable does not promote efficient deterrence. As stated above,⁸⁰ the company is

Guido Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69 (1975); Saul Levmore, *Probabilistic Recoveries, Restitution, and Recurring Wrongs*, 19 J. LEGAL STUD. 691 (1990).

⁷⁶ The analysis establishing these points is elaborate. I have performed that analysis elsewhere, and will not repeat it here. See Fischer, *Causation*, *supra* note 9, at 1364–77.

⁷⁷ *Gibson v. Garcia*, 216 P.2d 119 (Cal. Ct. App. 1950).

⁷⁸ *Id.* at 123.

⁷⁹ Wright, *Causation*, *supra* note 3, at 1800.

⁸⁰ See *supra* notes 75–76 and accompanying text.

adequately deterred by the specter of liability in cases where its poor maintenance is necessary for injury.

Corrective justice considerations also suggest the utility company should not be liable for two reasons. First, people may intuitively feel the driver, not the utility company, is the responsible party. Causation and responsibility are linked concepts. In criminal cases, for example, unsuccessful attempts are punished less harshly than successful attempts. Second, the whole purpose of the corrective justice policy is to put plaintiff in her prior position, and imposing liability on the driver accomplishes this at least if the driver is solvent or has insurance. Justice does not require that the utility company also compensate the plaintiff. Of course, the corrective justice argument for holding the utility company liable is much stronger if the driver is judgment proof.

The rationale for liability is strongest in cases like *Tidal Oil Co. v. Pease*⁸¹ where multiple tortfeasors each make both unnecessary and insufficient contributions. Liability promotes both corrective justice and deterrence. It furthers corrective justice because damages are necessary to restore plaintiff to the position he would have occupied if no tort had occurred. It would be unfair to allow each tortfeasor to escape liability by hiding behind the culpability of the other tortfeasors. Liability promotes deterrence by giving each tortfeasor an incentive to avoid making a contribution to injury. Economic theory supports liability because the only way to prevent the accident is to deter a sufficient number of tortfeasors from acting. This is a “simultaneous joint tort” where a fixed level of care by all (or most) of the tortfeasors is required to prevent the injury and harm.⁸²

Additional policies might influence a court’s decision to base liability on insufficient contributions to injury. One such policy is the need to help plaintiffs overcome impossibly difficult proof problems. The Restatement reporters cite asbestos cases supporting the theory that asbestos exposures insufficient to produce injury are causal.⁸³ The reasoning in those cases supports the reporters’ interpretation. Yet in mesothelioma cases that theory of causal contribution is not firmly rooted in science, and courts may employ the theory as a convenient means of reducing plaintiff’s very difficult proof problems.

We do not even know the mechanism by which asbestos fibers cause mesothelioma.⁸⁴ Science does not yet tell us whether mesothelioma requires

81 *Tidal Oil Co. v. Pease*, 5 P.2d 389 (Okla. 1931). For a discussion of *Tidal Oil Co.*, see *supra* notes 31–33 and accompanying text.

82 The analysis establishing this point is complex. It has been spelled out elsewhere and need not be repeated it here. See WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* 190–98 (1987); Fischer, *Duplicated Harm*, *supra* note 11, at 1147–49.

83 RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27, Reporters’ Note cmt. g (Proposed Final Draft No. 1, 2005).

84 Jane Stapleton, *Lords A’leaping Evidentiary Gaps*, 10 TORTS L.J. 276, 280 (2002).

a threshold dose of asbestos fibers⁸⁵ or whether the disease is caused by a single exposure to a single asbestos fiber.⁸⁶ In the former case it is logically possible for a court to find contributions of insufficient doses, prior to the contraction of the disease, causal because they contributed to the disease.⁸⁷ In the latter case this approach cannot work; only one fiber contributed to the disease, and it was both necessary and independently sufficient for the disease.⁸⁸ All the other fibers made no contribution.

The best reasoned asbestos opinions recognize proof of causation of mesothelioma is impossible in multi-exposure cases because we do not know enough about the etiology of the disease.⁸⁹ Courts trying these cases impose liability based on proof of increased risk of mesothelioma caused by exposure to asbestos rather than on proof of causation of the disease.⁹⁰ They do not impose liability based on insufficient contributions to injury.

Cases relying on insufficient contributions to harm adopt the premise that a threshold dose of asbestos is required to cause the disease but hold that once contracted the seriousness of the disease is not affected by additional doses.⁹¹ These cases impose liability on defendants whose doses were alone insufficient to cause the disease on the theory that each dose nevertheless contributed to the disease.⁹² Yet the case support for that theory of causation is equivocal. Many cases also exonerate defendants who contributed only an “insignificant or modest dose” of asbestos.⁹³ But these defendants may have made *sufficient*, rather than *insufficient*, contributions to injury since we know that even a “trivial exposure to asbestos” is sufficient to cause mesothelioma.⁹⁴

The asbestos mesothelioma cases may be based more on policy than on causation. Asbestos manufacturers are culpable having clearly caused much harm. Yet, proof of causation in individual cases is often impossible. Allowing manufacturers to escape liability is unjust. Rather than requiring

85 Chris Miller, *Judicial Approaches to Contested Causation: Fairchild v. Glenhaven Funeral Services in Context*, 1 LAW, PROBABILITY & RISK 119, 128 (2002); Stapleton, *supra* note 84, at 280–81, 284–85.

86 Miller, *supra* note 85, at 128; Stapleton, *supra* note 84, at 280–81, 284–85.

87 RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 Reporters' Note cmt. g (Proposed Final Draft No. 1, 2005).

88 *Id.*

89 *See, e.g.*, Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1219–20 (Cal. 1997); Fairchild v. Glenhaven Funeral Servs., Ltd., (2003) 1 A.C. 32, 36 (H.L.)(U.K).

90 Rutherford, 941 P.2d at 1220.

91 RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 Reporters' Note cmt. g (Proposed Final Draft No. 1, 2005).

92 *Id.*

93 RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 36, Reporters' Note cmt. b (Proposed Final Draft No. 1, 2005).

94 Stapleton, *supra* note 84, at 278.

plaintiffs “to prove the unprovable,”⁹⁵ courts have been creative in devising theories to prevent injustice.

Policy rather than causal principles may explain the result of some otherwise anomalous fraud cases. In these cases, reliance on a fraudulent misrepresentation, united with other motives, caused the plaintiff to enter into a disadvantageous business transaction. The courts required that the misrepresentation be necessary for the loss (i.e., the plaintiff would not have entered into the transaction but for the misrepresentation).⁹⁶ This result is inconsistent with the rule that necessity is not required in the case of multiple sufficient causes. Such cases clearly would not impose liability on the basis of a misrepresentation *insufficient* to induce plaintiff’s action. Requiring *necessity* (rather than *sufficiency* or even *insufficiency*) is aberrant if the deceitful action is based on the policy of preventing financial losses resulting from bad decisions. The corrective justice and deterrence considerations in the physical harm cases discussed above⁹⁷ would then apply. But the physical harm cases are based on the policy of preventing and compensating harm. These fraud cases would not be out of line if the courts deciding them viewed deceit law as a tool for preventing interferences with autonomy rather than preventing harm.

Fraud law may not be designed to prevent harm, e.g., financial losses resulting from bad investment or business decisions. Rather, it may be designed to prevent interference with personal autonomy.⁹⁸ In our free market economy we allow people the autonomy to make good or bad financial decisions all the time. Autonomy is most clearly impaired when the misrepresentation is necessary for harm (i.e., plaintiff relies on the misrepresentation to her detriment by making a bad decision she would not otherwise have made). Here there is strong reliance and clear detriment. Autonomy is less clearly impaired when the misrepresentation is sufficient for harm (i.e., here reliance is strong but not detrimental because plaintiff would have made the same decision due to the influence of other equally sufficient considerations). Autonomy is hardly impaired at all when plaintiff relies on a misrepresentation insufficient to affect her decision as there is no detriment and weak reliance. Thus, imposing liability for insufficient misrepresentations would almost never be justified to protect autonomy. An exceptional case, justifying liability, is where plaintiff detrimentally relies on “multiple insufficient” misrepresentations. Consider the following Restatement Illustration:

95 RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 Reporters’ Note cmt. g (Proposed Final Draft No. 1, 2005).

96 See *supra* note 43 and accompanying text.

97 See *supra* notes 65–81 and accompanying text.

98 See Alan Strudler, *Incommensurable Goods, Rightful Lies, and the Wrongness of Fraud*, 146 U. PA. L. REV. 1529, 1546–51, 1567 (1998).

A, B and C all make the same misrepresentation to D in order to induce him to buy land. D buys the land. In deciding to do so, he is substantially influenced by all three representations, although any two of them would have been sufficient to induce him to act. A, B and C are all subject to liability to D for pecuniary loss that he suffers through the purchase of the land.⁹⁹

Here, liability based on insufficiency is necessary to protect autonomy because all three insufficient causes combined to interfere with autonomy. This is very different from the case where nontortious motives are necessary and sufficient to induce plaintiff's behavior and these motives were coupled with an unnecessary and insufficient tortious misrepresentation.¹⁰⁰

Not all misrepresentation actions protect autonomy. Tortfeasors who make negligent misrepresentations that cause accidents, such as false assurances of safety, are liable for the harm they cause. Should tortfeasors be liable for misrepresentations making unnecessary and insufficient contributions to harm? Courts probably base liability in such cases more on the policy of preventing harm than the policy of protecting autonomy. If so, they should decide the question based on the other policy considerations discussed earlier in this section rather than autonomy. Determining whether a contribution to injury is causal can be influenced by the underlying purpose of the tort as well as by our abstract concept of causation. Not all misrepresentation actions serve the same tort purpose.

IV. THE SECOND PROBLEM CASE: DEPENDENTLY SUFFICIENT CAUSES

A. *Background*

In a previous article, I analyzed causation in fact in omission cases presenting the problem of dependently sufficient causes.¹⁰¹ I concluded that neither the but-for test nor the NESS test can reliably resolve the problem.¹⁰² To decide such cases, courts must rely either on intuition about causation or on policy. I also argued that policy is superior to intuition as a basis for decision.

⁹⁹ RESTATEMENT (SECOND) OF TORTS § 546 cmt. a, illus. 1 (1977).

¹⁰⁰ For a more in-depth discussion of the relationship between autonomy and causation, see David A. Fischer, *Tort Recovery for Loss of a Chance*, 36 WAKE FOREST L. REV. 605, 624-26, 645-50 (2001).

¹⁰¹ Fischer, *Causation*, *supra* note 9.

¹⁰² *Id.* at 1359-60. For a description of the NESS test, see *supra* notes 19-23 and accompanying text.

In his recent article, Professor Richard Wright criticizes my analysis.¹⁰³ He sets forth an elaborate argument designed to show my claim is incorrect.¹⁰⁴ He claims in such cases his version of the NESS test provides both the correct theoretical resolution and a resolution comports with human intuition about causation.¹⁰⁵ In this section I criticize Professor Wright's theory. I also cast doubt on his claims about intuition by presenting a survey of beginning law students revealing their views about causation in dependently sufficient causation cases. I will address my points of agreement and disagreement with Professor Wright for the purpose of clarifying this very complex issue.

Dependently sufficient causes occur when the absence of the combined intervention of two tortious acts or omissions is necessary to prevent an injury. They commonly arise where one actor fails to provide a safety device (or provides a defective safety device), the second actor fails to use the safety device (or would not have used the device if it had been provided), and an injury occurs that the use of an effective safety device would have prevented. The injury can occur to either of the actors or to a bystander. The difficult question is whether either or both of the actors caused the injury resulting from the failure of the safety device to prevent the injury. In order to separate causation issues from comparative negligence issues, this article uses examples where a bystander is the injured person. The following is a common example involving failure to use a nonfunctional safety device:

Rental Car

C, an automobile rental company, negligently fails to discover and repair the defective brakes on one of its cars. C rents the car to D who negligently fails to apply the brakes in time to avoid an accident in which Pedestrian is injured.¹⁰⁶

103 Wright, *Once More*, *supra* note 9.

104 *See id.* at 1123–31.

105 *See id.* at 1129. In support of his own version of the NESS test, Professor Wright wrote:

[Human intuition] about causation . . . which would explain our common judgments . . . [concerning] causation in the double-omission cases [is reflected in the NESS test] if the test is properly understood as incorporating a concept of causal sufficiency, which requires the complete instantiation of the potentially applicable causal generalization, and if proper attention is paid to the distinction between positive and negative causal effects and the need to take into account any causal priority within an applicable causal generalization when assessing negative rather than positive causal effects.

Id.

106 The hypothetical is based on *Saunders System Birmingham Co. v. Adams*, 117 So. 72 (Ala. 1928).

Failure-to-warn cases also commonly involve dependently sufficient causes, as is illustrated by the following hypothetical:

Failure to Warn

A product manufacturer fails to put a required warning on a conspicuous product label containing other warnings. The product user fails to read the label, and harms a bystander by using the product in a way that would have been prevented had the omitted warning been provided, read, and heeded.

The failure-to-warn case is actually a variation of the problem of the nonuse of a nonfunctioning safety device. The adequate warning—just like automobile brakes—functions as a safety device. The warning empowers the product user to use the product in such a way as to avoid injuring the bystander.¹⁰⁷ In essence, both the rental car hypothetical and the failure to warn hypothetical are variations of the same problem. In this response, I will focus on the rental-car hypothetical because Professor Wright did. My points in response, however, are equally applicable to similar cases such as the failure to warn hypothetical.

The problem presented by dependently sufficient causes has important practical implications. People injured by products sue manufacturers quite frequently on a failure-to-warn theory.¹⁰⁸ At the same time, product users commonly fail to read product labels and owner's manuals.¹⁰⁹ Thus, many cases arise where product users fail to read allegedly inadequate warnings.¹¹⁰

107 *E.g.*, *Ayers v. Johnson & Johnson Baby Prod. Co.*, 818 P.2d 1337 (Wash. 1991) (holding manufacturer liable for failing to provide a warning that would have instructed parents of child who suffered brain damage as a result of aspirating baby oil to protect the child from the risk.).

108 See MARSHALL S. SHAPO, *THE LAW OF PRODUCTS LIABILITY* § 19.01[1] (3d ed. 1994) (“The seller’s duty to warn provides a theme that runs throughout the law of products liability. Judging by the amount of litigation on the general issue during these ripening years of products liability law, the question occupies a central part of the battleground on which injured consumers and sellers clash.”).

109 James A. Henderson & Aaron D. Twerski, *Products Liability*, 10 KAN. J.L. & PUB. POL’Y 21, 26 (2000) (“[Y]ou cannot get out of a legitimate design defect case by plastering your products with warnings. The reason is, warnings are very often not followed. People do not read them. People do not pay attention to them.”); Howard Latin, “Good” Warnings, Bad Products, and Cognitive Limitations, 41 UCLA L. REV. 1193, 1219 (1994) (“Whether or not ideal consumers ‘should’ examine all warnings and directions, the caselaw provides empirical support for the conclusion that product users frequently do not read them.”).

110 *E.g.*, *Daniel v. Ben E. Keith Co.*, 97 F.3d 1329, 1333 (10th Cir. 1996); *Johnson v. Niagara Mach. & Tool Works*, 666 F.2d 1223, 1225 (8th Cir. 1981); *Sowles v. Urschel Labs. Inc.*, 595 F.2d 1361, 1365 (8th Cir. 1979); *Anderson v. Bungee Int’l Mfg. Corp.*, 44 F. Supp. 2d 534, 535 (S.D.N.Y. 1999); *Bushong v. Garman Co.*, 843 S.W.2d 807, 810 (Ark. 1992); *Cobb Heating & Air Conditioning Co. v. Herton Chem. Co.*, 229 S.E.2d 681, 682 (Ga. Ct. App. 1976); *Safeco Ins. Co. v. Baker*, 515 So. 2d 655, 656–657 (La. Ct. App. 1987); *Hiner v. Bridgestone/Firestone*,

The but-for test fails to satisfactorily resolve the rental car hypothetical set out above because application of the test implicates neither C (the provider of the car) nor D (the driver of the car) as a cause of the harm to the pedestrian. C did not cause it because even if the brakes had been in working order, the accident would still have happened because D failed to apply the brakes. Likewise, D did not cause the harm because, even if she had applied the brakes, the accident would have happened since the brakes were not in working order. The result seems wrong for two reasons. First, it appears one or both of the omitters caused the harm because if neither omission had occurred (the brakes were good and the driver used them) the pedestrian would not have been harmed.¹¹¹ Second, it is unfair to exonerate both tortfeasors at the expense of the innocent pedestrian. If only one of the omissions occurred, that omitter would have been liable to the pedestrian. Surely, it is unfair to allow each negligent tortfeasor to escape liability by hiding behind the negligent omission of the other.¹¹²

In the rental car case, one could argue that courts should decline to apply the but-for test by analogy to the multiple sufficient cause cases, such as the two-fires case set out above.¹¹³ That is, successive omissions in the rental car case are sufficiently analogous to simultaneous multiple sufficient forces in the two fires case to be governed by the same exception. The argument is supported by the same policy underlying the two fires case: the unfairness of allowing C and D to each hide behind the other with the result that the innocent pedestrian recovers from neither. The argument leads to the determination that both omissions are causal. Yet this solution may not be acceptable for two reasons.

First, the two omissions in the rental car case may not be sufficiently analogous to the two fires. The fires are each independently sufficient to be the but-for cause of the burning of the house if a negative fact is assumed, the absence of the other fire. There is no need to create additional positive facts. People can trace the series of events that actually occurred with respect to each fire independently and conclude each fire contributed to the result. But neither of the two omitted acts in the rental car case can be a but-for cause of the harm to the pedestrian unless a fictitious positive fact is assumed—that the other omitted act did occur. That is, the renter's failure to repair the brakes could not be a but-for cause of the pedestrian's harm unless the brakes had been applied by the driver (a positive fact that did not occur). Likewise, the driver's failure to apply the brakes could not be a but-for cause of the pedestrian's harm unless the brakes had been repaired

Inc., 978 P.2d 505, 510 (Wash. 1999).

¹¹¹ Wright, *Once More*, *supra* note 9, at 1125.

¹¹² For an elaboration on this corrective justice consideration, see Fischer, *Causation*, *supra* note 9, at 1380–84.

¹¹³ See *supra* notes 12–16 and accompanying text.

(also a positive fact that did not occur). Thus, there is a conceptual difference between the two fires case and the rental car case because in the latter case there is no actual series of events linking the omitted act with the harm. This difference may make it more difficult for one to find an intuitive causal link between the omissions and the harm in the rental car case.

The second reason the analogy to the two-fires cases may not work is that it may produce results courts are unwilling to accept. In some types of dependently sufficient cause cases, courts tend to exonerate the first ommitter. The most common examples are products liability cases where the manufacturer is sued for failure to warn, and the evidence shows the user would not have read the warning. Courts frequently exonerate the manufacturer because the failure to warn was not causal.¹¹⁴ If these cases are correctly decided, they cannot be explained by the exception to the but-for test for multiple sufficient forces (which would hold both ommitters liable). The cases could be explained by the but-for test, but only if courts are willing to exonerate both ommitters. Cases deciding the liability of the second ommitter (the person who failed to read the warning) are too rare to determine a judicial preference with respect to their liability.

The NESS test is a real contribution to legal analysis because it is an extremely helpful way of visualizing the nature of causal problems. Professor Wright claims the test does much more than this. He believes “the NESS test... capture[s] the concept of causation that we tacitly employ in all our (purely empirical) causal judgments.”¹¹⁵ I believe the inability of the NESS test to resolve successive omission cases like the Rental Car case and the Failure to Warn case suggests that the NESS test, as elaborated by Professor Wright, is not a test that can be universally applied to analyze all causal questions. It is simply a tool helpful for analyzing some, but not all, causal problems.

In the passage set out below, Professor Wright applied his test to the rental car hypothetical and concluded the negligent driver caused the resulting accident, but the negligent renter did not:

D's failure to try to use the brakes was necessary for the sufficiency of a set of actual antecedent conditions that did not include C's failure to repair the brakes, and the sufficiency of this set was not affected by C's failure to repair the brakes. A failure to try to use brakes will have a negative causal effect whether or not the brakes are defective. On the other hand, C's failure to repair the brakes was not a necessary element of any set of antecedent actual conditions that was sufficient for the occurrence of the injury. Defective brakes will have an actual causal effect only if someone tries to use them, but that was not an actual condition here. The potential negative

¹¹⁴ See *supra* note 110 and accompanying text.

¹¹⁵ Wright, *Once More, supra* note 9, at 1107.

causal effect of C's failure to repair the brakes was preempted by D's failure to try to use them.¹¹⁶

Professor Wright would reach his conclusion (the second ommitter caused the harm and the first ommitter did not) in any case involving “nonuse or misuse of a missing or defective safety device, unless the actor did not try to use the device because he knew it was missing or defective.”¹¹⁷

I criticized Professor Wright's analysis of the rental car case as not being helpful because it can easily be reversed to produce the opposite conclusion, that the first ommitter caused the harm and the second ommitter did not. Thus, one could reverse Professor Wright's reasoning as follows:

C's failure to repair the brakes was necessary for the sufficiency of a set of actual antecedent conditions that did not include D's failure to use the brakes, and the sufficiency of this set was not affected by D's failure to use the brakes. Leasing a car without having repaired the defective brakes will have a negative causal effect whether or not the brakes are used. On the other hand, D's failure to use the brakes was not a necessary element of any set of antecedent actual conditions that was sufficient for the occurrence of the injury. Failure to use the brakes will have an actual causal effect only if the brakes are in working order, but that was not an actual condition here. The potential negative causal effect of D's failure to use the brakes was preempted by C's failure to repair them.¹¹⁸

My second criticism pointed out that Professor Wright's analysis violated the NESS test principle that the NESS set be comprised only of “actual conditions.” I pointed out that Professor Wright's shifting use of the phrase “actual conditions” enables this manipulation.

Professor Wright claims to be looking for actual events on which to construct the appropriate set of antecedent causal conditions. In his rental hypothetical, however, he assumes that C's failure to repair the brakes did not occur because he excludes this omission from the pertinent set of actual antecedent conditions. Subtracting this negative fact (failure to repair the brakes) has the same effect as adding an imaginary positive fact (that the car was equipped with good brakes). Failure to apply these good brakes then becomes the cause of the accident. Thus, Wright's analysis is based on an assumption that does not square with reality. The argument can be manipulated by assuming that the driver attempted to apply the brakes, that is, excluding the driver's failure to apply the brakes from the set of actual

116 Wright, *Causation*, *supra* note 3, at 1801.

117 *Id.*

118 Fischer, *Causation*, *supra* note 9, at 1358.

conditions to which the failure to repair the brakes belongs. The result is that the renter, rather than the driver, caused the accident.¹¹⁹

Prior to responding to Professor Wright's reply, I should point out that in his recent article he revised the statement of his NESS test in response to suggestions provided in a very insightful article written by Professors Richard Fumerton and Ken Kress.¹²⁰ According to Professor Wright, in its "full form," the NESS test now "states that a condition contributed to some consequence if and only if it was necessary for the sufficiency of a set of existing antecedent conditions that was sufficient for the occurrence of the consequence."¹²¹ The new statement of the test differs from the old by requiring the condition to be "necessary for the sufficiency of a sufficient set" rather than by requiring the "condition be a necessary element of a sufficient set."¹²² Professor Wright does not explain precisely why he made the change. He continues to adhere to the "actual condition" requirement stating that "[t]he relevant notion of sufficiency is not merely logical or empirical, but rather requires that each element of the applicable causal generalization, in both the antecedent ('if' part) and the consequent ('then' part) must have been in actual existence (concretely instantiated) on the particular occasion."¹²³

B. Analysis

In his recent article, Professor Wright responds to my first criticism (the NESS test can be reversed to show either omitter caused the harm) but not to my second criticism (his analysis violates the NESS requirement that the set contain only actual conditions). The core of Professor Wright's criticism is that my reversal of the NESS test resulted from a mechanical application of the NESS test that required "mere analytical or empirical sufficiency."¹²⁴ My misapplication of the NESS test resulted from my failure to understand three points: First, the NESS test incorporates "a concept of causal sufficiency, which requires the complete instantiation of the potentially applicable causal generalization;"¹²⁵ second, I failed to pay "proper attention ... to the distinction between positive and negative

¹¹⁹ *Id.* at 1359.

¹²⁰ Richard Fumerton & Ken Kress, *Causation and the Law: Preemption, Lawful Sufficiency, and Causal Sufficiency*, 64 *LAW & CONTEMP. PROBS.* 83 (2001). Professor Wright thanks Professors Fumerton and Kress for pointing out the need for the refinement. Wright, *Once More, supra* note 9, at 1103 nn.112-13.

¹²¹ Wright, *Once More, supra* note 9, at 1102-03.

¹²² *Id.* at 1103 n.112.

¹²³ *Id.* at 1103.

¹²⁴ *Id.* at 1129.

¹²⁵ *Id.*

causal effects;”¹²⁶ and third, I failed to “take into account any causal priority within an applicable causal generalization when assessing negative rather than positive causal effects.”¹²⁷ I reply to these criticisms below.

Professor Wright’s first two points (the need for “causal sufficiency” and the failure to distinguish between “positive and negative causal effects”) are related. He claims that an independently sufficient act, omission, or condition is causal if and only if it is “*actually* sufficient” rather than an act, omission, or condition that merely “would-have-been sufficient (preempted).”¹²⁸ That is, in applying the test, one must make “sure that a condition or set of conditions which seems to have been sufficient actually fully existed and was sufficient, rather than having had its potential causal effect preempted by some other condition or set of conditions.”¹²⁹ Professor Wright quotes John Stuart Mill for the proposition that “[a]ll effects are connected, by the law of causation, with some set of *positive* conditions,” and that they almost always also require negative conditions as well, i.e., “the absence of preventing or counteracting causes.”¹³⁰ Consequently, the absence of a positive or negative preempting condition is necessary for causation.

Professor Wright uses the two-fires case to illustrate the necessity of describing conditions as independently sufficient conditions only if they are part of actually sufficient sets of conditions—ones that have not been counteracted (rendered insufficient) by positive or negative conditions. He states:

The NESS test can be used, and implicitly is used, to confirm the independent sufficiency of each fire in cases such as *Kingston*, in which the two large fires merged to burn down the plaintiff’s house. Each fire was necessary for the sufficiency of a set of existing antecedent conditions that contained it but not the other fire. The two sets overlap to a considerable extent, since they share such existing necessary conditions as oxygen, fuel to burn on the route to the house, lack of a downpour, the fire’s reaching the house while there is still a house left to burn, etc. Since the set containing each fire was fully instantiated, the two fires are duplicative causes of the destruction of the plaintiff’s property.

On the other hand, if one of the fires arrived first and burned the house down before the second fire arrived, only the first fire was independently sufficient. It was necessary for the sufficiency of an actually sufficient set that contains it but not the second fire. The second fire was not indepen-

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.* at 1109.

¹²⁹ *Id.*

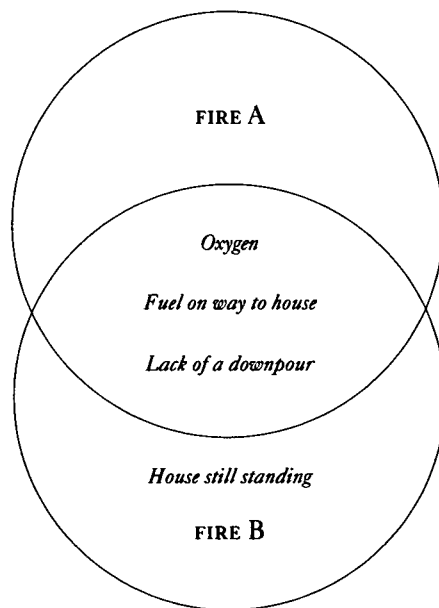
¹³⁰ *Id.* at 1129 (quoting 3 JOHN STUART MILL, A SYSTEM OF LOGIC, ch. V, § 3 (8th ed. 1872)) (emphasis added).

dently sufficient, since the set containing it but not the first fire was not fully instantiated. Remember that sufficiency means complete instantiation of the applicable causal generalization for destruction of the house by a fire. That causal generalization includes, as a necessary element, the fire's reaching the house while there is still a house left to burn. That element was instantiated, along with all the other elements of the causal generalization, for the set that includes the first fire but does not include the second fire. It was not instantiated for the set that includes only the second fire. The second fire would have been sufficient if the first fire had not existed, but it was not actually sufficient since the first fire did exist and preempted the potential causal effect of the second fire.¹³¹

Figure 1 illustrates why, under the NESS test, the fire that arrives first is causal and the other is not. Each of the two overlapping circles represents a set containing only one fire.

Under Professor Wright's analysis, "the fire's reaching the house while there is still a house left to burn," is a *positive* condition required to be included in the set in order to prevent the fire from being preempted as a cause of the house burning down.¹³² For this reason, in Figure 1 the set containing Fire B is causal and the set containing Fire A is not. The "lack of a downpour" is a negative causal effect that is necessary for the sufficiency of the set.¹³³ This negative condition is representative of a huge number of other negative conditions necessary for the sufficiency of the set, but which cannot be specified for practical reasons.¹³⁴ Other negative conditions include the absence of a flood extinguishing the fires, the absence of a firefighter extinguishing the fires, the

FIGURE 1



¹³¹ Wright, *Once More*, *supra* note 9, at 1104 (citing *Kingston v. Chicago & Nw. Ry. Co.*, 211 N.W. 913 (Wis. 1927)).

¹³² *Id.*

¹³³ *Id.*

¹³⁴ Fumerton & Kress, *supra* note 120, at 98-99.

absence of a safety device extinguishing the fires, etc. Professor Wright refers to all such negative conditions in a set as the “omnibus negative condition, the absence of any ‘preventing or counteracting’ cause.”¹³⁵

Because the NESS test requires the set to include the absence of all “preventing or counteracting” causes, I believe my second criticism, described above, (that Professor Wright’s analysis of the rental car case violates the NESS requirement that the set contain only actual conditions) remains valid. In the two-fires case, there really was an absence of a downpour that would have extinguished the fires. This negative causal effect had to be included in the set because it was essential for the destruction of the house by fire. One cannot eliminate the reality that there was no downpour without creating an actual downpour. Changing reality by assuming a nonexistent downpour—that negates causation by burning—is not permissible under the NESS test because the set must include only actual conditions. In the rental-car case, the failure to repair the brakes is a negative causal effect (a preventing or counteracting cause) that actually occurred. If the failure to repair had not taken place, the brakes would have been repaired, and applying them would have prevented the accident. The fictitious brake repair converts the driver’s failure to apply the brakes from an omission that made no difference into an omission that was a but-for cause of the accident. The assumption that the brakes are repaired represents a change in reality not permitted by the terms of the NESS test.

To put the point differently, in order to use the NESS test to prove the failure to apply the nonworking brakes contributed to the harm, our task is to construct a set wherein the failure to apply the nonworking brakes was necessary for the sufficiency of a set that was sufficient for the occurrence of the harm. But this is impossible. Failure to apply nonworking brakes was not necessary for the sufficiency of the set. It is only the failure to apply working brakes that is necessary for the sufficiency. Assume a set containing the following elements: *car moving toward plaintiff; car does not turn; plaintiff does not get out of car’s path; driver fails to apply nonworking brakes.* The set is sufficient to cause plaintiff’s injury, but the failure to apply the nonworking brakes is not necessary for the sufficiency. The injury will occur even if the driver does apply the useless brakes. The only way to make the failure to apply the brakes necessary for the sufficiency of the set is to exclude the adjective “*nonworking*” from the set for the purpose of implying that the brakes work.¹³⁶ But according to Professor Wright, removing a preventing or counteracting cause is not permissible:

¹³⁵ Wright, *Once More*, *supra* note 9, at 1130.

¹³⁶ If we wanted to construct a set showing that applying “working brakes” contributed to “a car stopping,” we could do so. The set would include both the “driver’s applying the brakes and the brakes’ being in proper working order”; both of these conditions are “necessary positive conditions” for the sufficiency of the set. See Wright, *Once More*, *supra* note 9, at 1130. Professor Wright uses this set as the basis for his argument that the failure to apply the

[W]hen applying the NESS test one must always double-check to make sure that the actual conditions that are excluded from the description of the supposedly sufficient set of actual antecedent conditions do not in fact undermine the sufficiency of the described set by preventing the instantiation of one or more of the necessary elements in that set.¹³⁷

1. *Causal Sufficiency v. Empirical Sufficiency.*—Professor Wright criticizes my use of the phrase “multiple-sufficient-cause” to describe all overdetermined-cause cases as “inaccurate and highly misleading”¹³⁸ because:

This phrasing is appropriate only when all the acts or omissions were (duplicative) actual causes, but not when one preempted the potential causal effect of the others, as when one fire arrived and burned down a house hours before the second fire arrived. Although the second fire would have been sufficient to burn the house down if the first fire had not already destroyed the house, it was not actually sufficient because the first fire had already destroyed the house.¹³⁹

I understand this criticism to be based on a distinction Professor Wright makes between “empirical” sufficiency and “causal” sufficiency.¹⁴⁰ “Empirically” sufficient conditions include those that merely “would-have-been sufficient” if they had not been preempted.¹⁴¹ On the other hand, “causally” sufficient conditions are those that “actually fully existed” and were sufficient because they were not preempted,¹⁴² i.e., the “omnibus negative condition, the absence of any ‘preventing or counteracting’ cause, was not satisfied.”¹⁴³

brakes has “causal priority” over the failure to repair the brakes. *Id.* at 1130. He uses causal priority to supplement the NESS test. I discuss the causal priority argument later in this paper. See *supra* notes 149–56. and accompanying text. My point here is simply that Professor Wright has not shown us how to construct a NESS set showing that “the failure to apply non-working brakes” contributed to “the failure of the car to stop.”

¹³⁷ Wright, *Once More*, *supra* note 9, at 1116 n.156.

¹³⁸ *Id.* at 1126.

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 1129 (Professor Wright states that the NESS test fails to capture intuition about causation only if “the NESS test is viewed ‘mechanically’ as requiring mere analytical or empirical sufficiency. But it is not true if the test is properly understood as incorporating a concept of causal sufficiency, which requires the complete instantiation of the potentially applicable causal generalization . . .”).

¹⁴¹ *Id.* at 1109 (Professor Wright states that in applying the NESS test one must make “sure to distinguish actually sufficient conditions from mere *would-have-been sufficient (preempted) conditions*. Make sure that a condition or set of conditions which seems to have been *sufficient actually fully existed and was sufficient*, rather than having had its potential causal effect preempted by some other condition or set of conditions.” (emphasis added)).

¹⁴² *Id.*

¹⁴³ *Id.* at 1130.

Professors Fumerton and Kress elaborate on the distinction between causal sufficiency and empirical sufficiency.¹⁴⁴ Employing this distinction, it may be possible to identify both the failure to repair the brakes and the failure to apply the brakes as being “empirically sufficient.” This is because an accident is destined to happen every time one or both of those failures occur, as long as the failure (or failures) occurs in a situation where the effective use of brakes is necessary to prevent the accident. The critical question is whether it is possible to go further and identify one of those omissions but not the other, as “causally” sufficient because it “preempts” the other omission. The analysis set out below questions whether it is humanly possible to do so in an objectively defensible manner. If we can only identify instances of causal sufficiency—as distinct from empirical sufficiency—by declaring they exist, it is a concept of little practical value.

When analyzing the rental-car hypothetical, Professor Wright insists the failure to try to use the brakes preempts the failure to repair the brakes. He states:

The absence of any causally prior necessary condition [failure to try to use the brakes] preempts the possible coming into play (through presence or absence) of any other necessary condition in the causal generalization [failure to repair the brakes], the operation of which was causally subsequent to or dependent upon the causally prior necessary condition.¹⁴⁵

Although Professor Wright does not explicitly spell out his reasoning process, I believe his analysis to be based on the idea that the failure to repair the brakes is preempted because the failure to repair the brakes is sufficient to cause the accident only in the “would-have-been sufficient” sense (empirical sufficiency), i.e., the failure to repair was preempted by the “negative causal effect” of the failure to apply the brakes. Therefore, causal sufficiency is lacking because there was no “set of existing antecedent conditions that was sufficient for the occurrence of the consequence.”¹⁴⁶ Or, to put the point differently, “an element of the applicable causal generalization [an attempt to apply the brakes was not] in actual existence.”¹⁴⁷

Note that Professor Wright’s preemption analysis in the two fires case (illustrated by Figure 1) is very different than his preemption analysis in the rental car case. In the two-fires case, preemption by Fire B is based on the outcome occurring before the cause of interest (Fire A) is in place. But that did not occur in the rental-car case. There, Professor Wright focuses on the order of the omissions coming into play to find preemption.

¹⁴⁴ Fumerton & Kress, *supra* note 120, at 92–95. They use the label “lawful” sufficiency (“related in a law-like manner”) to describe the kind of sufficiency that Professor Wright designates “empirical” sufficiency. *Id.* at 92–95, 101–102.

¹⁴⁵ Wright, *Once More*, *supra* note 9, at 1130–31.

¹⁴⁶ *Id.* at 1128, 1130–31.

¹⁴⁷ *Id.* at 1103.

In the rental-car case, Professor Wright appears to argue that the failure to apply the brakes has a negative causal effect preventing the failure to repair the brakes from coming into play.¹⁴⁸ Yet a good advocate for a plaintiff in a suit against the rental car company would argue just the opposite. The failure to repair the brakes has a negative causal effect that prevents the failure to apply the brakes from coming into play. The failure to repair the brakes preempted the failure to apply the brakes because without good brakes an accident caused by a failure to stop became inevitable at the moment the car was given to the Driver rendering any failure to apply the brakes completely irrelevant. We know this accident was inevitable because causation is determined in hindsight. For purposes of determining causation it does not matter whether the accident was foreseeable in advance.

So far we have what appears to be nothing more than examples of good advocacy. Each side adopts a characterization of the problem leading to the conclusion they desire. They argue the point to the judge or jury, and the lawyer with the most persuasive argument prevails. Figure 2 demonstrates that the key to the characterization used in these arguments lies in selecting the place to begin the analysis. Figure 2 is a time line (moving left to right) for the collision in the rental car case. Plaintiff's lawyer begins the analysis of the problem at the time of the negligent repair and argues the subsequent failure to apply the brakes is irrelevant and therefore preempted. Professor Wright begins the analysis at the time when the driver fails to apply the brakes and argues this omission preempts the misconduct that preceded it (the failure to repair) by rendering it irrelevant (it never came into play).

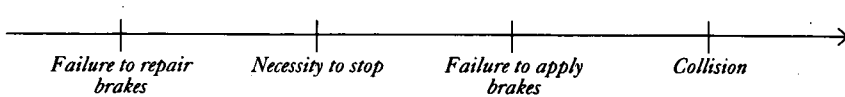
Professor Wright, however, claims there is more to this than good advocacy. He asserts there is one clearly correct answer: the failure to apply the

148 Professor Wright states:

However, when the situation is one in which we are attempting to identify the causes of the brakes' not being operated—that is, a failure of the causal generalization for braking, which is a “*negative causal effect*” ... the causal priority becomes significant and must be taken into account when applying the NESS test. The failure of any causal generalization is logically or empirically guaranteed to occur if any one of the necessary positive conditions in the antecedent of the causal generalization is absent. Yet, the failure can be explained causally only by taking into account any relevant causal priority among those positive conditions. *The absence of any causally prior necessary condition preempts the possible coming into play (through presence or absence) of any other necessary condition in the causal generalization*, the operation of which was causally subsequent to or dependent upon the causally prior necessary condition.

Id. at 1130–31 (emphasis added).

FIGURE 2
RENTAL CAR TIME LINE



brakes is causal and the failure to repair is not. This is because the failure to apply the brakes has “causal priority.”¹⁴⁹ He explains:

The causal sequence for the operation of a safeguard is initiated when a person attempts to use the safeguard and then subsequently proceeds, as a result of such attempt, with the activation of the safeguard if the safeguard is present and in proper condition. That is, the activation of the safeguard depends on someone’s first attempting to use it, so that if no such attempt is made, “the temporally first omission [the failure to provide a working safeguard] is not causal because it never came into play.”¹⁵⁰

I believe his analysis to be as follows: both applying the brakes and having them in good working order are necessary for their successful operation.¹⁵¹ Because of his notion of causal priority, the necessary condition of applying the brakes is causally prior to the necessary condition of having brakes in good working order, and thus a failure to apply the brakes preempts the failure to have good working brakes.

But surely the plaintiff suing the rental company will argue that the “causal sequence for the operation of a safeguard is initiated when” the safeguard is repaired to an operable condition. When viewed in this manner, the “causal priority” moves forward from the time of the repair. If causal priority moved forward from the repair, then in our example the first negative causal effect (failure to repair) would be the cause because it preempts the occurrence of the second negative causal effect (failure to apply the brakes). From this perspective, it is irrelevant to the causal inquiry whether or not the driver applies the (useless) brakes.

Professor Wright’s notion of when the causal sequence begins is quite rational. At least in the context of the rental car hypothetical, I believe there are other people who share his view. But what is this notion of causal priority based on? There are two possibilities: either it is based on a causal law or it is based on intuition about causation. If causal priority is a causal law,

149 Wright, *Once More*, *supra* note 9, at 1129.

150 *Id.* at 1128 (quoting Fischer, *Causation*, *supra* note 9, at 1361)

151 *Id.* at 1130 (Professor Wright states: “In the usual case in which the brakes are successfully operated, both the driver’s applying the brakes and the brakes’ being in proper working order are concrete instantiations of different necessary positive conditions in the completely instantiated causal generalization for braking, and thus are NESS causes (and, in this situation, also but-for causes) of the successful operation of the brakes.”).

then Professor Wright's analysis suffers from a serious deficiency pointed out by Professors Fumerton and Kress. In their analysis of the NESS test, Fumerton and Kress pointed out the inadequacy of "empirical" sufficiency (which they refer to as "lawful" sufficiency) as a tool for explaining preemption.¹⁵² They suggested the NESS test might better explain preemption if Professor Wright used "causal" sufficiency instead.¹⁵³ They identified a major objection, however, to the use of causal sufficiency:

We must recall that Wright's project is to analyze the meaning of the word or, alternatively, the concept of causation. If he deploys the concept of a causal law in defining causation, surely his critics will charge him with a vicious form of circularity—his NESS test for causation is nearly tantamount to defining causation as causation.

Professor Wright is caught between a rock and a hard place. To avoid the charge that he cannot handle certain cases of causal preemption, he must come up with a way to distinguish lawful (or law-like) sufficiency from causal sufficiency without relying on the concept of causation, a task that has eluded all philosophers to date.¹⁵⁴

If Professor Wright's claim is that causal priority is a causal law, then his reasoning does appear circular because he merely asserts the existence of the causal law. He does not explain the source of the causal law or how others might verify its existence. In essence, he would be claiming the second omission is the NESS cause because the second omission caused the accident.

2. *Intuition About Causation.*—On the other hand, Professor Wright's concept of causal priority might not be a causal law at all. It might just be intended to reflect intuition about causation. If there is indeed a predominant intuition about causation, I have no objection to courts formulating rules of law to reflect that intuition. My earlier article, however, was skeptical about the existence of a commonly held intuition, and the article stated a bias for deciding such cases on the basis of policy rather than intuition.¹⁵⁵ Yet, I recognize that law must reflect community values. If intuition is sufficiently uniform and sufficiently strong, I am willing to concede the law should reflect that intuition. An excellent recent article summarizes empirical evidence about how people view causation.¹⁵⁶ The studies show that people

152 Fumerton & Kress, *supra* note 120, at 89.

153 *Id.* at 84, 102–05.

154 *Id.* at 102.

155 For a discussion of the policy considerations relevant to deciding such cases, see Fischer, *Causation*, *supra* note 9, at 1364–84.

156 Barbara A. Spellman & Alexandra Kincannon, *The Relation Between Counterfactual ("But For") and Causal Reasoning: Experimental Findings and Implications for Jurors' Decisions*,

have a well-established concept of causation. The concept is affected by many factors such as necessity, sufficiency, directness, remoteness, temporal sequence, etc.¹⁵⁷

Is there a commonly held causal intuition reflecting Professor Wright's concept of causal priority? I conducted an empirical study designed to help answer this question. In my study, first-semester, first-year torts students responded to a survey. The survey was submitted to the students at the very beginning of their first torts class, before the students were introduced to any principles of tort law. Three of the survey questions dealt with the influence of causal priority on the student's views of causation. Each student was given, and answered, only one of the three survey questionnaires. Between 26 and 31 students answered each of the three questionnaires.

Two of the questions involve situations where Professor Wright claims causal priority plays a role. These questions involve two omissions, where one omission must take place before the other omission. These questions are based on the rental-car hypothetical and the failure-to-warn hypothetical set out earlier. The third questionnaire is based on the following hypothetical which Professor Wright cites as an example of a multiple omission case not involving causal priority:

Two Switches

"Suppose that two switches need to be turned off in order to avert a fire, and that X has a duty to turn off one, Y the other but neither does so and a fire which would have been averted had they both performed their duty breaks out."¹⁵⁸

Professor Wright concludes each failure to throw the switch is a duplicative cause of the fire because there is no causal priority in this hypothetical.¹⁵⁹ "There is no such causal priority in the two-switches case, in which the operation of each switch is not dependent on the prior operation of the other switch, but rather each switch operates independently of the other switch."¹⁶⁰

The survey responses to the two-switches case¹⁶¹ verify Professor Wright's conclusion that people intuitively believe both omissions are

64 LAW & CONTEMP. PROBS. 241 (2001).

157 *Id.* at 246–47.

158 Wright, *Once More*, *supra* note 9, at 1127.

159 *Id.* at 1131 ("On the other hand, if, as in the two switches hypothetical, there is no causal priority among the multiple absent necessary conditions, then each absent necessary condition is a duplicative cause of the failure of the causal generalization.").

160 *Id.* at 1128.

161 The two-switches survey:

In answering the following question, circle the answer that you believe is most correct. Please circle only *one* choice.

Two switches (switch A and switch B) must be thrown to prevent a boil-

causal.¹⁶² Nineteen of the twenty-six respondents concluded each failure to throw the switch caused the fire (choice 3). The other seven respondents concluded neither omission was causal (choice 4).

The responses to the other two questionnaires show the requirement that one omission must take place prior to the other does influence people's views of causation. The responses fail, however, to show that intuition is influenced in a consistent manner by this factor. Furthermore, only a minority of people who responded to both questionnaires share Professor Wright's view that the second ommitter, and not the first ommitter, caused the injury.

In the rental-car questionnaire,¹⁶³ thirty students responded. The largest number of respondents (thirteen, or 43%) thought both the failure to

er fire. The sequence in which the switches are thrown does not matter as long as they are both thrown. Company A is responsible for throwing switch A. Its employee negligently failed to throw switch A. Company A is responsible for the negligence of its employee.

Company B is responsible for throwing switch B. Its employee negligently failed to throw switch B. Company B is responsible for the negligence of its employee.

The boiler fire broke out and destroyed the property of Company C. Company C sues both Company A and Company B for negligently causing the boiler fire.

The *cause* of the boiler fire was:

- 1) Company A's failure to throw switch A.
- 2) Company B's failure to throw switch B.
- 3) Both the failure of Company A to throw switch A and Company B to throw switch B.
- 4) Neither the failure of Company A to throw switch A nor Company B to throw switch B.

Please briefly explain your reasoning.

¹⁶² Wright, *Once More*, *supra* note 9, at 1127.

¹⁶³ The rental-car survey:

In answering the following question, circle the answer that you believe is most correct. Please circle only *one* choice.

An accident occurred when a delivery truck collided with a taxi cab, causing damage to the cab. Ready Truck Rentals, Inc. rented the truck to United Delivery, Inc. for use in United's delivery service. The brakes on the truck were completely inoperable due to a defect, and would not have slowed or stopped the truck if they had been applied. Ready's mechanic was negligent in failing to discover and repair the brake defect. Ready is responsible for the negligence of its mechanic.

United's driver obtained the truck from Ready and drove the truck off of the Ready parking lot onto a street. The truck collided with the taxi cab while the cab was legally stopped on the street at a stop light a short distance from the Ready parking lot. There was adequate time to stop

repair the brakes and the failure to apply the brakes caused the accident (choice 3). Only ten respondents (33%) concluded the second omission (failure to apply the brakes) by itself was causal (choice 2). The smallest number of respondents (7 or 23%) thought the first omission (failure to repair the brakes) by itself was causal (choice 1). If, as Professor Wright suggests, there is a predominate intuition that the second omission by itself was causal, one would expect at least a majority (sixteen) of the respondents would have selected choice 2. That only ten of the respondents selected choice 2, therefore, is inconsistent with Professor Wright's suggestion. The discrepancy between ten and sixteen respondents selecting choice 2 is statistically significant.¹⁶⁴

Curiously, the responses to the failure-to-warn questionnaire¹⁶⁵ were significantly different. Thirty-one students responded. The largest num-

a vehicle with proper brakes prior to hitting the cab. United's driver, however, negligently failed to apply the truck brakes prior to the collision. The driver did not know that the brakes were inoperable because the driver had no occasion to use them prior to the collision. United is responsible for the negligence of its driver.

The taxi company sues Ready Truck Rentals and United Delivery for negligently causing damage to the taxi.

The *cause* of the collision was:

- 1) Ready's failure to repair the brakes.
- 2) United's failure to apply the brakes.
- 3) Both the failure to repair the brakes and to apply the brakes.
- 4) Neither the failure to repair the brakes nor the failure to apply the brakes.

Please briefly explain your reasoning.

¹⁶⁴ $X_2(1) = 9.351$, $p < .05$. This article considers a discrepancy to be "statistically significant" if the statistical test used indicates that the likelihood that the discrepancy would occur by chance is less than 5% (reported by the p -value as $p < .05$). See generally BARBARA G. TABACHNICK & LINDA S. FIDELL, *USING MULTIVARIATE STATISTICS* (2d ed. 1989).

¹⁶⁵ The failure-to-warn survey:

In answering the following question, circle the answer that you believe is most correct. Please circle only *one* choice.

Damage occurred when an aerosol spray paint can that had been thrown into the trash exploded when the trash was being burned. Company A manufactured and sold the can of spray paint. It placed a *very conspicuous warning label* on the can that warned about the risk of inhaling paint fumes, and instructed how to apply the paint safely. The label contained no warning that exposing the can to fire could cause the can to explode. The failure to include such a warning on the label was negligent.

Company B purchased the aerosol paint can from Company A. After using the paint, Company B's painter threw the empty can into a bin of trash that the painter knew was to be burned. Company B's painter negligently failed to read the warning label on the can prior to using or

ber of respondents (fourteen or 45%) concluded the first omission (failure to put the warning on the label) was by itself causal (choice 1). Only one respondent (3%) believed the second omission (failure to read the warning label) was by itself causal (choice 2). Ten respondents (32%) believed both omissions were causal (choice 3), and six respondents (19%) concluded neither omission was causal (choice 4). As stated above, if there is a common intuition that the second omission by itself was causal, one would expect at least a majority (sixteen) of the respondents would have selected choice 2. That only one of the respondents selected choice 2, therefore, is starkly inconsistent with Professor Wright's thesis. The discrepancy between one respondent and a majority of respondents (sixteen) selecting choice 2 is statistically significant.¹⁶⁶

The responses to the rental car questionnaire and the failure-to-warn questionnaire do not support the notion that the predominant intuition is that the second omission was causal because the first omission was preempted. The rental car survey itself shows substantial disparity of views, with only 33% of the respondents believing the second omission and not the first omission was causal. The results of the failure-to-warn survey show substantially different results, with only one respondent (3%) believing the second omission rather than the first was causal. I do not claim my modest survey definitively establishes intuition about causation in dependently sufficient cause cases. The survey suggests, however, that intuition is inconsistent and varies according to context. I remain unconvinced that intuition about causal priority is sufficiently uniform and fixed to justify a hard and fast rule that in successive omission cases the second omission is causal because it preempts the first omission.

The survey instruments permitted the respondents to make comments explaining the reasons for their choices. In examining those comments, I

disposing of the can. Company B is responsible for the negligence of its painter.

When the trash was burned, the can exploded and caused damage to the property of Company C. Company C sues Company A and Company B for negligently causing damage to its property.

The *cause* of the explosion was:

- 1) Company A's failure to give a warning about the risk of explosion.
- 2) Company B's failure to read the warning label on the can.
- 3) Both the failure to warn about the risk of explosion and the failure to read the label.
- 4) Neither the failure to warn about the risk of explosion nor the failure to read the label.

Please briefly explain your reasoning.

¹⁶⁶ $X_{(1)} = 4.821$, $p < .05$.

could find no explanation for why so many students viewed the warning case differently than the rental car case.

V. CONCLUSION

The great bulk of tort cases raise no theoretical problems concerning causation in fact. A typical automobile accident case often creates proof problems concerning the source and nature of the victim's injuries but does not require an analysis of the meaning of cause. No test of causation is really needed in such routine cases. The but-for test, however, does adequately explain them. This experience with easy cases can lead us to assume there are no difficult theoretical causation issues in tort law. The assumption is wrong.

Multiple sufficient causes, exemplified in this article by the two-fires hypothetical, do raise difficult theoretical issues. Courts resolve these issues in a way counter to the results produced by the but-for test. The NESS test represents an advance in legal theory because it provides an explanation for what the courts have done. It also provides a useful way for visualizing the causal role of insufficient forces. Yet it is a mistake to conclude the NESS test, or any test, can definitively resolve all theoretical causation issues, including when liability is appropriate for insufficient causal contributions to harm. Courts can only decide the issue by resorting to intuition or policy. Policy considerations will usually support liability for an insufficient contribution to harm only when the other forces at work are also insufficient and tortious. From a doctrinal point of view, courts can make the liability decision either as a matter of causation or as a matter of some other tort doctrine, such as proximate cause. For practical, rather than theoretical reasons, it is desirable for courts to make those decisions by relying on noncausal doctrines.

The NESS test also cannot definitively resolve dependently sufficient successive omission cases. They raise more than simple fact questions. They require judgments about responsibility. The necessity of making these judgments renders it impossible to resolve the cases mechanically by the use of formulas. The cases illustrate the way difficult causation in fact issues blend into questions of duty and proximate cause.

While I applaud the use of devices such as the but-for test and the NESS test to clarify our thinking about cause, I cannot believe we will ever be able to develop a mechanical test that will satisfactorily resolve difficult issues such as those discussed in this article.

