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# Causation Actually

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## ARTICLES

# CAUSATION ACTUALLY

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## I. INTRODUCTION

In many situations involving multiple forces, it is clear that one or a number of tortious actors did *not* injure the victim.[1] Courts insist that in these cases there is *no* causal link between the non-injuring actor's behavior and the victim's harm. Yet, they nevertheless hold them liable. This Article focuses on three such celebrated paradigms that have proven to be both vexing and immune to analysis. The first type—concerted action situations—deals with cases where actors, while pursuing a common plan, engage in a tortious activity that harms the victim. A standard example is a drag race where a pedestrian hit by one driver can also recover from other drivers and even spectators.[2] The second type—concurrent causes[3]—includes situations where a number of independent forces join and harm the victim. Here, the classic example is of two fires, which merge and destroy the victim's cabin. Courts openly declare that neither fire can be said to be the actual cause of the victim's harm but, despite the alleged lack of causation, impose liability on all tortious actors.[4] The third type—alternative liability cases—involves cases like *Summers v. Tice*, where two hunters carelessly shot in the victim's direction.[5] Although it was clear that one of the hunters did *not* injure the victim, the court held both liable.[6]

Courts have developed different theories to impose liability on the non-injuring actors. From the least to most controversial, these include concerted action, substantial factor, and alternative

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[1] A tortious actor can be a non-injuring party. For example, consider a scenario in which *A*, encouraged by *B*, a spectator, punches *V*. Both *A* and *B* act tortiously, although it is clear that only *A* is the injurer (B is the non-injuring tortious party). For a similar use of these terms, see RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. h (AM. LAW INST. 2010) (defining the term "tortious conduct").

[2] RESTATEMENT (SECOND) OF TORTS § 876 cmt. c, illus. 2, cmt. d, illus. 4 (AM. LAW INST. 1979); RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIAB. § 15 cmt. a, illus. 1 (AM. LAW INST. 2000); *see also infra* notes 77–81.

[3] The term "concurrent causes," as used here, refers to situations where multiple independent forces combine and harm the victim. These forces can be necessary or unnecessary, sufficient or insufficient, simultaneous or sequential (as when the victim's cabin is consumed by two fires, one of which reached the cabin earlier in time).

[4] *See* Anderson v. Minneapolis, St. Paul & Sault Ste. Marie Ry. Co., 179 N.W. 45, 48 (Minn. 1920) (explaining that if two fires unite "there is joint and several liability, even though either fire would have destroyed plaintiff's property"); RESTATEMENT (SECOND) OF TORTS § 432(2) (AM. LAW INST. 1965) (applying the substantial factor test).

[5] Summers v. Tice, 199 P.2d 1, 1–2 (Cal. 1948).

[6] *Id.* at 3.

liability.[7] Although the reasoning behind these doctrines and the conditions necessary for their application vary considerably, there seems to be a consensus that "[i]n all these cases the requirement of proving [actual] causation is relaxed."[8] Actors who clearly did not "cause" the victim's injury (such as the spectator in the drag race or the hunter who missed Summers) are held liable for a wrong committed by another. The reason for "relaxing" the actual causation requirement is twofold. The first reason is fairness to the victim. The argument is that the victim who suffered injustice—"a harm . . . caused by the wrongful conduct of another"—deserves to be compensated.[9] The second reason for imposing liability on careless actors who admittedly did not injure the victim is to deter them from what is perceived as an antisocial[10] and inefficient activity.[11] Liability expresses a social distaste and "moral condemnation for the actions of all of the defendants."[12] It is meant to incentivize them to take care and avoid putting others at risk.[13]

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[7] For an explanation of these doctrines, see *infra* Sections IV.A, IV.B, and notes 122–24 and accompanying text, respectively.

[8] Boim v. Holy Land Found. for Relief & Dev., 549 F.3d 685, 695, 697 (7th Cir. 2008) (explaining actual causation is relaxed "because otherwise there would be a wrong and an injury but no remedy"); *see also* Shackil v. Lederle Labs., 561 A.2d 511, 515 (N.J. 1989) (noting that " 'concert of action,' with its offspring, 'enterprise liability' [and] alternative liability" are exceptions to the otherwise "indispensable" cause in fact requirement). Some scholars note that the actual causation requirement in these cases is outright abandoned. *See, e.g.*, Wex S. Malone, *Ruminations on Cause-in-Fact*, 9 STAN. L. REV. 60, 97 (1956) (noting that it "seems sensible" that courts "should be free to abandon" the cause-in-fact requirement).

[9] Richard W. Wright, *Liability for Possible Wrongs: Causation, Statistical Probability, and the Burden of Proof*, 41 LOY. L.A. L. REV. 1295, 1300 (2008).

[10] *See* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIAB. § 15 reporters' note, cmt. a (AM. LAW INST. 2000) (noting that liability in concerted action cases expresses "moral condemnation"); *see also* W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 41, at 266–68 (5th ed. 1984) [hereinafter PROSSER AND KEETON] (discussing the but-for and substantial-factor rules); RESTATEMENT (THIRD) OF TORTS § 27; David A. Fischer, *Products Liability—An Analysis of Market Share Liability*, 34 VAND. L. REV. 1623, 1629, 1633 (1981) (explaining that in *Summers* "each defendant's conduct was unquestionably of an antisocial nature" and noting the law of causation "seeks to . . . discourage socially undesirable activity"); *see also infra* note 18.

[11] *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 212 (Vickin Been et al. eds., 9th ed. 2014) (discussing the economics of holding non-injuring tortfeasors liable); MICHAEL FAURE, TORT LAW AND ECONOMICS 84 (2009); STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW 108 (1987) (discussing the economics of causation and the use of liability to induce "optimal behavior").

[12] RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIAB. § 15 reporters' note, cmt. a (AM. LAW INST. 2000); *see also Boim*, 549 F.3d at 697 (noting that group causation theories

This Article offers a novel approach for analyzing multiple causes situations where the victim suffers an indivisible harm. First, it debunks the myth that group causation theories, such as concerted action, substantial factor, and alternative liability, are fair to the victim or that they are designed to promote deterrence.[14] In deviation from the prior literature, this Article shows that these group causation theories share an important feature. Under certain conditions, they *reduce* the parties' incentives to take care and may result in more, not fewer, injuries. In other words, group causation theories may well be the very reason the victim suffers injustice in the form of harm to her person or property. To illustrate this point, consider Example 1 below:

> **Example 1: A Drag Race.** A number of actors consider whether to engage in a drag race. Each can estimate her own benefit from the activity but not others'. The benefit can be tangible (e.g., a promised prize) or intangible (e.g., the thrill from the ride, breaking the law, or even harming someone). For simplicity, assume that each participant expects to benefit $40 from the activity. The expected harm to the victim is $90. Each driver can avoid harming the victim if she invests $35 in precaution.

To understand the multi-party dynamic, first consider a party consisting of two individuals, for example, two drivers. In this party, each driver is better off taking care.[15] If a driver takes care, she can expect a gain of $5 (40-35). In contrast, if she drives

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seek to avoid a situation in which there is "a wrong and an injury by no remedy"); RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 27 (explaining the rationale behind multiple sufficient causation); PROSSER AND KEETON, *supra* note 10, § 41, at 267; *infra* note 18 and accompanying text.

[13] *See infra* note 18 and accompanying text.

[14] The term "group causation theories," as used here, simply refers to theories courts say they apply to "relax" the actual causation requirement in the three paradigmatic cases. It is not meant to imply that a collective caused the harm as suggested by Mark Geistfeld. Mark Geistfeld, *The Doctrinal Unity of Alternative Liability and Market-Share Liability*, 155 U. PA. L. REV. 447, 452–53 (2006); *see also infra* note 170 and accompanying text.

[15] In order to first analyze the effect of the tort system, the example ignores the possibility that the same activity can give rise to both civil and criminal liability. The effects of the criminal system on the parties' incentives are explored later in Section IV.C.

carelessly, she can only expect a loss.[16] Next, consider a party consisting of three individuals, for example, the same two drivers and a spectator who encourages them to race. Now the parties' incentives change dramatically. Each driver is better off if *both* drive *carelessly*. This is because under concerted action theory, everyone—the two careless drivers and the spectator who encourages them—will be held liable. This means that each can expect to pay only $30 (90/3).[17] Now driving carelessly is worthwhile. With a benefit of $40 and an expected loss of $30, each driver can expect to gain $10 (40-30)—twice the gain compared to driving carefully. This explains the parties' agreement to race carelessly. The result is that concerted action theory—a theory that is premised on fairness and deterrence[18]—can dilute the actors' expected liability to the point that neither will have an incentive to take care. In the drag race hypothetical, tort law *encourages* the very "antisocial" behavior it purports to condemn.

Second, this Article challenges the consensus that group causation theories abandon the actual causation requirement. Like the prior literature, this Article concedes that in these cases tort law holds liable parties who did not injure the victim (e.g., the spectator). Yet, in deviation from this prior literature, this Article shows that a non-injuring party can nevertheless be a but-for reason for the victim's harm. This is well illustrated by Example 1.[19] Recall that as part of a group of two drivers, each is better off taking care. Yet, the same two careful drivers would agree to drive *carelessly* if a spectator encourages them. The spectator is thus an actual cause of the harm. Indeed, but for the spectator's

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[16] If one driver drives carelessly, she can expect to pay $90, gain $40, and lose $50 (40-90). If both drive carelessly, each can expect to pay $45 (90/2), gain $40, and thus lose $5 (40-45). The result is a dominant strategy to take care. Each driver is better off taking care regardless of the other's actions.

[17] With some simplifying assumptions it is possible to show that the expected liability of each party is independent of the apportionment regime (whether it is joint and several liability, several liability, or any other regime). *See* J. Shahar Dillbary, *Apportioning Liability Behind a Veil of Uncertainty*, 62 HASTINGS L.J. 1729, 1756–69 (2011) (modeling the effect of different apportionment regimes); *see also infra* Part IV.

[18] *See, e.g.*, Abel v. Eli Lilly & Co., 343 N.W.2d 164, 176 n.19 (Mich. 1984) (noting that concerted action "seems to have developed to deter hazardous group behavior"); Lyons v. Premo Pharm. Labs, Inc., 406 A.2d 185, 190 (N.J. Super. Ct. App. Div. 1979) ("The purpose of this theory is . . . to deter anti-social behavior.").

[19] *See supra* p. 5.

tortious conduct, the driver who hit the pedestrian would have taken care and the pedestrian would not have been harmed. Note that in Example 1 it was *not* the words or gestures of encouragement that enticed the careless driving. Rather, it was the law of causation. It was the knowledge that under concerted action theory, all participants (including the spectator) would shoulder the cost of an accident that made it worthwhile for the injuring driver to forgo taking care and hit the victim. The result is that each of the parties is an actual cause and thus equally responsible for the harm. This includes the party who did not injure the victim (e.g., the non-hitting driver)[20] and a party who could not have hit the victim (e.g., the spectator). A similar dynamic occurs in the case of alternative liability and concurrent causes situations.[21]

The remainder of this Article is organized as follows. Part II reviews the prior economic literature and shows its deficiencies. This literature, for the most part, ignores the challenges that multiple causes cases pose. Members of the law and economics movement often mention one of the paradigmatic cases but neglect to explain why the law imposes liability on actors who did not injure the victim.[22] This is hardly surprising given that one important line of this literature is explicitly willing to dispose of causation altogether.[23] Another strand of the literature views causation as a means to limit the scope of liability. It argues that "too little" liability—holding an injurer liable for only a portion of

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[20] To see why the harm is unlikely to occur absent the non-hitting driver, consider a case in which one driver is encouraged to drive carelessly by a third party (e.g., a passenger or spectator). If the driver agrees to drive carelessly, she can expect to pay $45 (90/2) and lose $5 (40-45). Accordingly, the driver will take care for an expected gain of $5 (40-35). But if the party includes three individuals—for example, the same driver and spectator *and* another driver—both drivers will be better off if they drive carelessly. Because under concerted action theory each driver will be held liable, regardless of whether she hits the pedestrian, each of the drivers can expect to pay $30 (90/3) and thus gain $10 (40-30). The result is that but for the non-injuring driver's tortious behavior, the hitting driver would take care and the harm would be avoided.

[21] *See infra* Part III (discussing the parties' incentives) and Section IV.A (discussing actual causation).

[22] Cooter and Ulen, for example, discuss *Summers* simply as an example of an unintentional tort. ROBERT COOTER & THOMAS ULEN, LAW AND ECONOMICS 188 (6th ed. 2011). They later revisit the example only to explain that "[u]nder traditional rules of tort liability, only the hunter who actually caused the harm is liable; the hunter who missed is not liable." *Id.* at 201. *See also* SHAVELL, *supra* note 11, at 109 (noting that determining "which of several archers shot the arrow that struck the [victim]" can be hard to ascertain).

[23] *See infra* note 28 and accompanying text.

the harm she inflicted—may result in sub-optimal care levels; "too much" liability—holding one liable for an injury she did not inflict—may result in sub-optimal activity levels.

In deviation from this literature, Part III shows that in the context of multiple causes, "too little" liability can actually lead to optimal care levels, and "too much" liability can increase activity levels. Building on a model I developed elsewhere,[24] I show that group causation theories encourage group wrongdoing, or a "tortfest," and that doing so can be socially desirable.[25] Moreover,

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[24] J. Shahar Dillbary, *Tortfest*, 80 U. CHI. L. REV 953, 958 (2013) (focusing on socially beneficial activities in alternative care situations—that is, cases where either party alone can avoid the harm). The cases discussed here, on the other hand, are for the most part joint-care cases. To avoid the victim's harm, a number of parties must take care. Moreover, this Article explains how causation doctrines incentivizes the parties to engage in tortfests.

[25] In Example 1, behaving carelessly in a group of three or more actors is socially desirable if one assumes with the law (although judges vehemently deny) that the pleasure to the tortious actors from the activities and even the harming of others, should be given weight. The private benefits of the actors are discussed in Section III.C, *infra*. Under this view, taking care will result in an expected welfare-gain of $15 (40x3-35x3), whereas if neither takes care, total welfare will double to $30 (40x3-90). This assumes, for simplicity and without loss of generality, that the spectator, like the drivers, benefits $40 from (watching) the race and that she will incur a cost of $35 if she exercises care (e.g., the cost of restraining herself from encouraging the parties). Another assumption is that there are no market alternatives. Here, you should note that although the activity is productive, in the sense that it generates benefits (to the actors) and is thus different than a mere transfer of wealth (as theft would be), it is still coercive. The victim did not consent to the activity. A market transaction, that is an agreement between the actors and the would-be victim, would be preferable for a number of reasons. First, it would ensure that the actors' benefits from the activity outweigh the cost to the victim. The seller (the would-be victim) would not permit the activity unless she is fully compensated. In contrast, if the parties are able to bypass the market—for example, if they can destroy the victim's $90 car first and then pay damages according to some objective measure—the result may be inefficient if the actors pay less than the victim's reservation price. Indeed, if two actors believe that they can escape liability altogether (i.e., pay nothing) or pay only $50, even two actors would engage in a race without taking care (40x2>0,50) although this would be socially undesirable (80<90). *See also* Calabresi & Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1125 (1972) (explaining that requiring actors to pay "an objectively determined value of the property stolen [or otherwise taken] would be to convert all property rule entitlements into liability rule entitlements" and warning that "[l]iability rules represent only an approximation of the value of the object to its original owner and willingness to pay such an approximate value is no indication that it is worth more to the thief than to the owner"). A liability rule could also encourage potential victims to over-invest in precaution and under-invest in capital. For these reasons the law discourages actors from bypassing the market (e.g., by imposing punitive damages in the case of intentional torts). However, a liability rule can be justified when a market solution is not available in order to effectuate a productive activity, as in cases where the actors cannot negotiate with each other or with the potential victims. *See also* Dillbary, *supra* note 24, at 959, 973–74 ("Traditional theory explains the need to impose liability (often referred as a 'liability rule') in high–transaction cost settings."); *infra* notes 69–77

under certain conditions, the more tortfeasors engage in the activity—the more shooters, the more drivers and spectators attend the race, and the more actors set fires that merge—the more welfare is enhanced. In these cases, group causation theories define the pool of defendants whose liability must be diluted in order to encourage welfare-enhancing accidents.

Part IV—the heart of the paper—turns to debunk the consensus that group causation theories like concerted action, substantial factor, and alternative liability abandon the actual causation requirement. Section IV.A shows that courts and scholars have been too quick to concede that the but-for test fails in cases of concerted action, concurrent causes, and alternative liability. It reveals that in some cases the tortious behavior of each of the non-injuring parties is necessary to bring about the harm. In other cases, it *seems* that no one party is necessary for the harm, although every party is, and thus that each actor is a but-for reason for the harm.[26] Finally, this section shows that even in cases where neither party is necessary for the harm, a presumption of actual causation against the tortious parties could increase societal welfare.

Armed with these new insights, Section IV.B turns to offer a more holistic approach to the seemingly disparate paradigmatic cases. Using the simple model and applying it to leading decisions, this section hypothesizes that the three group causation doctrines can be, to some extent, interchangeable and provides some anecdotal evidence that they are. Section IV.C focuses on the relationship between tort law and criminal law. It investigates cases where the actors' behaviors may result in both criminal and civil liability (e.g., drag races). This part shows that in such cases, the two legal systems seem to clash: criminal law deters the parties from engaging in activities that tort law, via its group causation theories may encourage. It then offers an explanation that is premised in institutional design and provides recommendations to courts and policy makers.

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and accompanying text. A liability rule is also a solution, even if imperfect, to the public good aspect of the activities discussed in this Article.

[26] For example, if four actors engaged in drag racing in Example 1, each participant could argue that the harm would have occurred even if she acted carefully because of the careless actions of the other three participants.

Section IV.D uses concurrent causes situations as a case study to investigate some of the positive and normative implications of the model. Unlike the *Restatement (Second)* and the *Restatement (Third)*, Section IV.D shows that those whose tortious behavior only contributed trivially to the victim's harm could nevertheless be a but-for cause of her injury. Thus, to the extent that the lack of actual causation was the reason to exempt those who contributed marginally, the exemption, without more, cannot be justified. Section IV.D also sheds light on cases where multiple insufficient forces combine—an issue with regard to which the two Restatements sharply diverge. It explains why parties should be liable for a harm that none could cause alone. The reasoning is not premised on the fairness rationales that (mis)guided the drafters of the Restatements, courts, and scholars. Rather, it is based on economic theory. It shows that in these cases, each actor's behavior (whether the force she exerted was insufficient or her contribution to the harm was trivial) could be an actual cause of the *entire* harm.

Part V discusses the assumptions and limitations of the model. The model does not assume that courts and individuals are omniscient. Nor does it assume that they can determine the value each wrongdoer places on the tortious activity or the wrongdoers' cost of precaution. In fact, it assumes the opposite: that information is prohibitively costly and that each party can estimate her cost and benefit from the activity, but not others'. Still, the model is limited in scope. To begin with, it focuses on the three paradigmatic cases. The model also assumes that each party can engage in ex ante cost-benefit analysis (although it can easily be extended to cases where such calculations are not feasible[27]).

Part VI analyzes one important alternative to group causation theories. To date, courts have considered only two options. In the three paradigmatic cases, the choice, we are told, is whether: (a) to apply a group causation theory and hold all actors (including non-injuring actors) liable; or (b) exempt these actors from liability and leave the victim remediless. Part VI then turns to investigate a third option: the one-party-pays-all rule. Under this rule, liability for the entire harm is imposed on one party only. This can be the party who physically injured the victim (if only one such party

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[27] *See infra* note 220 and accompanying text.

exists and is known), or someone chosen randomly. After analyzing this alternative regime, Part VI shows that, although under certain conditions, group causation theories and the one-party-pays-all rule may lead to the same results, from an efficiency standpoint, it is preferable to apply a group causation theory. Part VII provides concluding remarks.

## II. THE ECONOMICS OF ACTUAL CAUSATION

Actual causation was—and in many ways still is—the black sheep of the law and economics movement. And, as is often the case with black sheep, at least one line of the literature—led by giants like Coase, Landes and Posner, and Calabresi—was willing to dispose of causation altogether.[28] For them, "a case in which causation is an issue [can be simply resolved] by asking how the case should be decided consistently with the [Learned] Hand formula."[29]

Others were willing to recognize a limited economic role for actual causation. Shavell, for example, focuses on the role of causation in curbing actors' liability. Too much liability, he explains, will not affect the optimal level of care, but will result in over-deterrence (sub-optimal activity levels).[30] Too little liability will result in under-deterrence (sub-optimal levels of care).[31] To

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[28] *See* FAURE, *supra* note 11, at 84 ("The original economic theory of tort law deliberately rejected an explicit role for a causation doctrine in determining liability."); WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW 229 (1987) (explaining why "the idea of causation can largely be dispensed with in an economic analysis of torts" and concluding that "the injurer 'causes' the injury when he is the lower-cost avoider of it but not otherwise"); Guido Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69, 85 (1975) ("One could do away with the *but-for* test and employ other methods to 'determine' whether avoidance is worthwhile."); William M. Landes & Richard A. Posner, *Causation in Tort Law: An Economic Approach*, 12 J. LEGAL STUD. 109, 124–25 (1983) (discussing the rationale for alternative liability and noting that "we can analyze this type of case using a modified Hand formula without explicitly discussing causation"); Richard A. Epstein, *A Theory of Strict Liability*, 2 J. LEGAL STUD. 151, 165 (1973) ("Both Calabresi and Coase, then, share the belief that the concept of causation should not, because it cannot, play any role in the determination of liability for harms that have occurred.").

[29] LANDES & POSNER, *supra* note 28, at 229. According to the Hand formula "liability depends upon whether $B$ [the burden of precaution] is less than $L$ [the severity of the harm] multiplied by $P$ [the probability of harm]: i.e., whether $B < PL$." United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947).

[30] SHAVELL, *supra* note 11, at 108.

[31] *Id.* at 107–08.

see why, suppose that engaging in a certain activity (e.g., hunting) creates a 10% chance that the victim will incur a $100 damage, and that the cost of taking care is $4. Holding the actor liable for harm she inflicted will incentivize her to take care. By paying $4 on precaution upfront, she can avoid an expected judgment of $10 (100x10%). Suppose now that, if the actor engages in the activity, she will be arbitrarily liable for two harms: the harm she inflicted *and* a $400 harm that she did *not* inflict, which materializes at a 20% chance. It is easy to show that the "excess" liability will not alter the actor's incentive to take care. If she takes care, her expected liability is $84—the $4 cost of precaution and the $80 (400x20%) expected damages for the harm she did not inflict. If she does not take care, her expected liability will be higher: $90 (400x20%+100x10%).[32] Either way, taking care reduces her expected liability by $6 (from $10 to $4 if she is only liable for damages she inflicted or from $90 to $84 if she is also liable for the second harm).

Too much liability, however, can negatively impact activity levels. Suppose, for example, that the actor in the example above benefits $7 from the activity. If the actor's liability is limited to damages she inflicted, she will engage in the activity and take care ($7>$4). But, if the actor is also liable for an additional $400 damage she did not inflict, her expected loss will be so high that she would forgo the activity ($7<$84 if she takes care or $90 if she does not).[33]

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[32] A popular example is a cricket field owner who negligently erected a nine-foot fence instead of a ten-foot (the proper height) fence. Liability should be imposed for balls flying over nine feet, but below ten feet. Holding the owner liable for balls flying above ten feet is imposing crushing or unrestricted liability. It will find her liable for harms that would not have been avoided even if she had taken optimal care. Such crushing liability will not alter her incentive to take care. THOMAS J. MICELI, THE ECONOMICS APPROACH TO LAW 59–61 (2004); Marcel Kahan, *Causation and Incentives to Take Care Under the Negligence Rule*, 18 J. LEGAL STUD. 427, 431–32 (1989).

[33] Exempting the actor from the excessive $400 harm she did not inflict may not solve the sub-optimal activity level concern. It is true that in a perfect negligence system the careful actor who can expect to be exempted from liability would engage in the activity (7>4). The tort system, however, is imperfect. It is rife with mistakes and uncertainties. The results are pockets of strict liability. Parties who took optimal care may nevertheless be held liable. In the above example, the actor may avoid the activity altogether if she expects to be liable for more than $7 (e.g., due to a judicial mistake). *See* MICELI, *supra* note 32, at 59–61 (discussing the economic role of actual causation under the negligence rule); Kahan, *supra* note 32, at 429, 432 (analyzing "the incentives to take care that are created under the negligence rule").

Shavell's groundbreaking contribution focuses, for the most part, on simple cases when one party causes harm to another. Shavell did, however, address situations like *Summers*, where it was clear that one careless party injured the victim but the other did not.[34] He explains that in *Summers* "neither hunter could be said to be a cause in fact of the injury," but he nevertheless justifies the imposition of liability on economic grounds.[35] If the court did not impose liability on both, he argues, the result would be to "inappropriately weaken the incentive of the injurers to avoid [the] harm," because it would mean that, from the hunters' perspective, engaging in the activity is costless.[36] Shavell expresses a similar concern in his seminal book on accident law with regard to concurrent causes cases.[37] Judge Posner echoes the same view in his treatise.[38] After discussing a case in which hunters, *A* and *B*, both carelessly shot and hit *C*, he explains that "viewed separately, neither A nor B caused C's death."[39] Yet, despite the lack of actual causation, he concludes that "it would be an economic mistake to let both off scot-free, as that would reduce deterrence."[40]

As the drag racing example reveals, imposing liability on multiple actors can also dilute the parties' incentives to avoid the harm—even to the point that no one would take care. However, the result is not necessarily inappropriate. It could be economically sound. In the drag racing example, if liability were imposed only on the driver who injured the victim, a welfare-enhancing accident would not take place.[41] The injuring driver

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[34] Steven Shavell, *An Analysis of Causation and the Scope of Liability in the Law of Torts*, 9 J. LEGAL STUD. 463, 494 (1980).

[35] *Id.*

[36] *Id.*

[37] SHAVELL, *supra* note 11, at 164–67. Shavell analyzes the effect of different liability regimes on parties' incentives to take care. Relying on a concurrent cause example involving two polluting factories, he concludes that if liability of each factory is diluted "injurers may not be led to take adequate care if they act independently." *Id.* at 164. He then warns that "the problem of inadequate incentives . . . could be substantial where the number of injurers is large" and that the problem will increase with the number of injurers. *Id.* at 166. Shavell is correct that, with more actors, the liability of each would be diluted further. He is also correct that, as a result of the dilution, the parties may decline to take care. However, what he misses is that forgoing care could be economically justified. For an illustration see *infra* note 48 and accompanying text.

[38] POSNER, *supra* note 11, at 212–13.

[39] *Id.* at 212.

[40] *Id.*

[41] *See supra* notes 20, 25.

would take care and avoid the harm.[42] On the other hand, if the injuring driver shares liability with two non-injuring participants, neither will take care, nor should they. Taking care is not cost-justified. The parties would need to spend an aggregate amount of $105 (35x3) to avoid a $90 expected harm. Moreover, the activity, *if conducted carelessly*, increases total welfare. It yields $120 (40x3) in benefits compared to a $90 harm, thus producing an expected surplus of $30 (120-90). Example 1 above and Part IV.A below also reveal that the claim that "neither [actor] could be said to be a cause in fact of the injury"[43] is incorrect. Each of the non-injuring actors is (or for policy reasons should be considered) equally responsible for the harm. In the above example, but-for each and every one of the actors, the tortious activity would not have occurred and the victim would not be harmed. Each actor's behavior is thus an actual (but-for) cause of the harm.

Scholars and courts analyzing multiple causation situations often rely on Shavell's insights.[44] They explain that imposing liability on those who acted wrongfully toward the victim (but did not harm her) is necessary to increase deterrence. Consider, for example, Fischer's analysis[45] of *Tidal Oil Co. v. Pease*—a

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[42] *See infra* Section VI (discussing the possible results of applying the one-party-pays-all rule).

[43] Shavell, *supra* note 34, at 494 (discussing the role of the actual causation in cases involving multiple injurers and explaining that in situations like *Summers* the "requirement of causation in fact is relaxed"); *see also* Posner, *supra* note 11, at 212 (arguing that when two hunters, *A* and *B*, both fatally and carelessly shot *C*, neither *A* nor *B* separately caused *C*'s death and explaining that "the analysis is the same if only one bullet hits C and we do not know whether A or B fired it"); *supra* notes 34–40 and accompanying text.

[44] *See, e.g.*, David A. Fischer, *Insufficient Causes*, 94 KY. L.J. 277, 295 (2005) (explaining that in cases involving multiple tortfeasors, where the action of neither is necessary nor sufficient to alone cause the harm, "[l]iability promotes deterrence by giving each tortfeasor an incentive to avoid making it a contribution to injury"); David M. Schultz, *Market Share Liability in DES Cases: The Unwarranted Erosion of Causation in Fact*, 40 DEPAUL L. REV. 771, 779 (1991) (noting the competing concerns of "compensating victims" and avoiding "excessive liability"); *see also* Smith v. Eli Lilly & Co., 560 N.E.2d 324, 329 (Ill. 1990) (citing Fischer, *supra* note 10, at 1628–29) ("The identification element of causation in fact serves an important function in tort law. Besides assigning blame-worthiness to culpable parties, it also limits the scope of potential liability and thereby encourages useful activity that would otherwise be deterred if there were excessive exposure to liability."); Eberhard Feess & Ulrich Hege, *Efficient Liability Rules for Multi-Party Accidents with Moral Hazard*, 154 J. INSTITUTIONAL & THEORETICAL ECON. 422, 425 (1998) (arguing that "if each injurer . . . pays only a fraction of the total harm, then care levels will be inefficiently low since each injurer will only take a part of the total harm into consideration").

[45] Fischer, *supra* note 44, at 295 (arguing that "[t]he rationale for liability is strongest in cases like *Tidal Oil Co. v. Pease*").

concurrent causes situation similar to the two-fires hypothetical.[46] In *Tidal Oil*, the plaintiff's cattle died after drinking from two streams, each polluted by a different group of defendants.[47] There was no evidence that any polluter alone could have caused the damage. Yet, the court held all defendants liable. It explained that, where the defendants' independent acts combine to produce an indivisible harm, each is responsible for the entire result "even though the act of any one defendant might not have caused it."[48] Fischer justifies the holding based on, among other things, economic theory:

> The rationale for liability is strongest in cases like *Tidal Oil Co. v. Pease*. . . . 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.[49]

Fischer is incorrect for a number of reasons. To begin with, *Tidal Oil* is not necessarily a case where each or most tortfeasors must take care to avoid the harm. For example, assume that the pollutants of nine out of ten operating factories must combine to cause the victim's harm. Assume also that taking care costs each factory $35. Here, requiring all actors to take care at a total cost of $350 (35x10) does not make any sense. The same accident can be avoided if two factories take care at a total cost of $70 (35x2). Second, and more importantly, the conclusion that imposing liability on a large number of actors "promotes deterrence"[50] and is the "only way to prevent the accident"[51] is faulty. If anything,

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[46] Tidal Oil Co. v. Pease, 5 P.2d 389, 391 (Okla. 1931) (noting neither polluter alone could have caused the harm but the polluters' combined power proved deadly for plaintiff's livestock); *see also* Magnolia Petroleum Co. v. Dexter, 57 P.2d 1155, 1156 (Okla. 1936); RESTATEMENT (SECOND) OF TORTS § 433A, cmt. i, illus. 15 (AM. LAW INST. 1965) (basing illustration on *Tidal Oil*).

[47] *Tidal Oil Co.*, 5 P.2d at 390–91.

[48] *Id.* at 391.

[49] Fischer, *supra* note 44, at 295 (emphasis added).

[50] *Id.*

[51] *Id.*

imposing liability on a large number of defendants could dilute their incentives to take care and could result in more (not fewer) accidents.[52] If deterrence is the "strongest"[53] rationale for imposing liability in cases like *Tidal Oil*, it is a very poor rationale. Finally, as Part III below explains, and the drag race example implies, the rationale for imposing liability is the opposite. It is to allow welfare-enhancing accidents. For example, if the harm to the victim is $40, and each of the ten factories above benefits $50 from the activity, the activity is efficient (50x10>40). And not even one factory should take care (35x2>40), nor would it (40/10<35).

This Article further shows that the conventional wisdom, stated by Shavell, does not hold in the three paradigmatic cases. According to this wisdom, too much liability results in suboptimal activity levels, whereas too little liability results in suboptimal precaution levels.[54] However, things are different in the multiple causes situations discussed here. Part III below shows that by imposing liability on those who did not injure the victim—what the literature views as "excessive liability"[55]—the law encourages welfare-enhancing activities; by imposing "too little" liability on those who injured the victim (but can expect to pay a fraction thereof), the law encourages actors to take the optimal level of care.

## III. A NEW RATIONALE: ENCOURAGING WELFARE ENHANCING ACCIDENTS

### A. DILUTION OF LIABILITY CAN RESULT IN OPTIMAL PRECAUTION LEVELS

Dilution of liability, a phenomenon I discussed elsewhere,[56] provides another explanation for group causation theories like the one applied in *Summers*.[57] In these cases, courts first determine which defendants acted tortiously towards the victim (i.e., whether

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[52] *See supra* Part III; *supra* pp. 5–6.

[53] Fischer, *supra* note 44, at 295.

[54] SHAVELL, *supra* note 11; *supra* notes 30–40 and accompanying text.

[55] *See, e.g.*, Schultz, *supra* note 44, at 779 (noting tort law's need to avoid imposing "excessive liability").

[56] Dillbary, *supra* note 24, at 965.

[57] The overwhelming majority of jurisdictions adopted some version of *Summers v. Tice*. *See* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 28(b) reporters' note, cmt. f ("Only two jurisdictions have rejected the concept of alternative liability since the Second Restatement.").

there was careless shooting, the encouragement of reckless driving, or the unreasonable setting of a fire). Courts then apply a group causation theory to establish a causal link between each of the tortious actors—those who injured the victim and those who did not (e.g., the hunter who did not injure Summers, the spectator in a drag race who clearly did not injure the victim, and the polluters in *Tidal Oil* who may not have contributed to the victim's damage). The result of holding all tortious actors liable is a dilution of each actor's liability. The actor who injured the victim can expect to pay less than the harm she inflicted. The non-injuring yet tortious actors can expect to pay a fraction of the damages stemming from an injury they clearly did not inflict. By imposing liability on all tortious actors and then diluting each actor's liability, the law encourages actors to engage in the activities and take precautions if they are cost-justified, and forgo taking care if it is socially undesirable to do so. In other words, concerted action and other group causation theories serve as a sorting mechanism. They are designed to deter actors from engaging in "bad," or welfare decreasing, accidents, but they encourage them to engage in "good," or welfare enhancing, accidents.

To understand the role dilution of liability plays in alternative liability cases, reconsider Example 1 above[58]—with one exception. To illustrate how similar the causation theories are, assume that, instead of drivers in a drag race, the participants are hunters. For convenience, the example (as applied to hunters) is reproduced below:

> **Example 1: Hunting**. A number of actors consider whether to hunt. Each can estimate her own benefit from the activity but not that of others. The benefit can be tangible (e.g., the market value of the game) or intangible (e.g., the pleasure from hunting). Each participant expects to benefit $40 from the activity. The expected harm to the victim is $90. Each hunter can avoid harming the victim if she invests $35 in precaution.

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[58] *See supra* p. 5.

A hunter should and will take care if she is the only one hunting. Taking care allows the hunter to avoid an expected judgment of $90 at a low cost of $35, and even expect a profit (40>35). The result does not change if two are hunting concurrently. Total benefits from taking precaution outweigh the costs (90>35x2), and each enjoys an expected gain of $5 (40-35). But in the case of three hunters, taking precaution is not cost-justified. Requiring each hunter to take care results in a total cost of $105 (35x3), only to prevent a $90 damage to the victim. As Table 1 below demonstrates, taking care becomes more and more costly and socially undesirable as the number of hunters increases. With five hunters, taking care comes at a cost of $175 (35x5), almost twice the cost of the injury ($90). If, on the other hand, the actors do not take care, social welfare more than quadruples (increasing from $25 to $110).[59]

| | | With Precaution | | Without Precaution | | |
|---|---|---|---|---|---|---|
| Number of Hunters $h$ | Total Benefits TB=40$h$ | Total Cost TC=35$h$ | Total Welfare TB-TC[60] | Indiv. Exp. Liab. 90/$h$[61] | Indiv. Net Gain 40-90/$h$ | Total Welfare TB-90[62] |
| 0 | - | - | - | - | - | - |
| 1 | 40 | 35 | 5 | 90 | -50 | -50 |
| 2 | 80 | 70 | 10 | 45 | -5 | -10 |
| 3 | 120 | 105 | 15 | 30 | 10 | 30 |
| 4 | 160 | 140 | 20 | 22.5 | 17.5 | 70 |
| 5 | 200 | 175 | 25 | 18 | 22 | 110 |

Table 1: The Expected Costs and Benefits from Hunting With and Without Precautions

[59] If each of the five hunters takes care, each can expect to profit $5 (40-35), resulting in a total expected increase in welfare of $25 (5x5). If on the other hand, none take care, each hunter can expect to benefit $40 and the harm to the victim is expected to be $90, resulting in total expected increase in welfare of $110 (5x40-90).

[60] When precautions are taken, the potential victim is not damaged and each hunter can expect a net profit of $5 (40-35). The expected increase in total welfare is thus equal to $5$h$, where $h$ is the number of hunters. It can also be calculated as the sum of expected benefits, 40$h$, minus the total expected cost of precaution, 35$h$, or 40$h$-35$h$.

[61] With $h$ careless hunters, the expected liability of each is 1/$h$(90) or 90/$h$. For example, with three such hunters, each can expect to pay one-third of the damage, or $30 (90/3).

[62] Without precaution, the total expected cost is the $90 expected harm to the victim. The expected change in total welfare is thus the sum of the expected benefits to the wrongdoers, 40$h$, minus the expected cost, $90, or 40$h$-90.

The conclusion is that efficiency requires that, when three or more hunters engage in the activity, none take care. Why then does alternative liability hold all hunters liable—those who injured the victim and those who did not? The reason is not deterrence per se, nor is it moral disdain towards the actors' behavior.[63] In fact, the opposite is true. *Liability is imposed on all actors in order to dilute their incentives to take care and allow them to engage in socially desirable accidents.* Put differently, doctrines like alternative liability, which hold all tortious actors liable for the victim's injury, may be the very reason the parties in a large enough group do not take care. The reason for imposing liability in these situations is the courts' inability to distinguish between welfare decreasing and welfare maximizing accidents. The problem is that determining the exact moment where taking precaution becomes inefficient (here, when the number of actors is three or higher) is a daunting, if not an impossible, task. A court that would like to conduct the cost-benefit analysis would need to measure and compare the subjective benefits that each of the several actors garner from the activity and compare these subjective benefits to the cost of precaution and the victim's expected injury. Courts rarely have such information. Even if the cost of precaution can be calculated, the subjective value of hunting to each individual hunter is not usually observable.

The solution is to defer to the market participants—that is, the actors—the decision as to whether to engage in an activity and whether to take care. To do so, courts first determine whether the actors were liable. The analysis is individual. Here, ignoring for a moment the others, each actor had a duty to the victim that she breached because taking care was cost-justified (35<90).[64] This is the working of the celebrated Learned Hand formula.[65] Then, in the second step, courts use a group causation doctrine such as

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[63] For a different view, see Fischer, *supra* note 10, at 1629–30, 1632 (arguing that alternative liability expresses "moral blame" and explaining that in *Summers* "[c]ulpability-based blame was present because each defendant's conduct was unquestionably of an antisocial nature"); Malone, *supra* note 8, at 84 (noting that moral blameworthiness was a factor in *Summers* because "both defendants were shown to be wrongdoers" who had "violated one of the most exacting rules that courts . . . administer").

[64] This is so despite the fact that, taking under consideration all actors' payoffs, the activity may be net beneficial. *See* Dillbary, *supra* note 24, at 975 n.68, 1001 n.129 (explaining that liability may be imposed on actors "although the total benefit from the activity outweighs the loss"); *infra* note 110.

[65] *See* United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947).

alternative liability to hold each of the hunters liable for the entire harm. The effect of imposing liability on a number of actors, including those who clearly did not injure the victim, is an effective dilution mechanism. It encourages the hunters to take care when doing so is cost-justified. In our example, one hunter will take care, which is the socially desirable result (35<90). The same will happen with two hunters. Each hunter can expect a benefit of $5 (40-35) if she takes care, but a loss of $5 (40-90/2) if both act carelessly, or $50 (40-90) if she acts carelessly when the other takes care. With three hunters none would want to take care, since the expected liability of each is diluted by the alternative liability doctrine to 90/3, or $30. In such a case, the hunters are better off if they all forgo taking care. Acting careless in unison comes with an expected benefit of $10 (40-90/3). Acting carefully promises half of the gain: $5 (40-35).

To sum, the example reveals that the concern that the injurer will be subject to "too little" liability is overly broad. "Too little" liability can indeed result in less investment in precaution, but the result may be optimal. Forgoing care can increase total welfare. The next section focuses on the impact of group causation theories on *activity* levels.

### B. DILUTION OF LIABILITY CAN RESULT IN OPTIMAL ACTIVITY LEVELS

In deviation from the prior literature, which argues that imposing liability on those who did not injure the victim can result in over-deterrence in the form of sub-optimal activity levels, this Section shows that the opposite could also be true. Holding liable non-injuring actors can achieve *optimal* activity levels. To explain this point, reconsider Example 1,[66] with the only exception being that now the cost of precaution is higher: $60 (rather than $35). For convenience, the modified example is reprinted below:

> **Example 1B: Hunting**. A number of actors consider whether to hunt. Each expects a $40 benefit. The expected harm to the victim is $90. Each actor can avoid harming the victim if she invests $60 in precaution.

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[66] *See supra* p. 5.

Here, unlike before, hunting is welfare decreasing if conducted by one or two hunters. With one hunter, the activity confers a benefit of $40, but inflicts an expected damage of $90. Taking precaution does not make sense either because the cost of precaution outweighs the benefit from hunting (40<60). The result does not change if two hunters engage in the activity (40+40<60x2, 90). In both cases, it is best if the actors avoid the activity altogether. But with three hunters, a harmful activity that was inefficient if conducted by one or two becomes socially desirable. With three hunters, the benefits from engaging in the harmful activity outweigh the expected cost to the victim (40x3>90) and efficiency requires that *none* take care (60x3>90).

As I showed elsewhere, a liability rule combined with a dilution mechanism can result in welfare-increasing accidents by deferring the decision of whether to act and take care to market actors.[67] This is exactly what group causation theories like alternative liability do. In the above example, it will incentivize two actors (by subjecting them to liability) to avoid hunting (40<60, 90/2). But, it encourages group wrongdoing if three (or more) actors hunt. By holding each liable for the entire $90 harm but diluting the hunters' individual liability to $30 (90/3), alternative liability makes it worthwhile for each to engage in the activity and forgo taking care. The result is that, if the three act in unison, each actor can obtain a gain of $10 (40-90/3).[68]

### C. RESPECTING INJURERS' SUBJECTIVE VALUATIONS

Courts are aware of the fact that many activities come with *social benefits* that justify the harm to the victim.[69] Indeed, the

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[67] Dillbary, *supra* note 24, at 954.

[68] The same dynamic occurs in concurrent causes cases. Suppose, for example, that in Examples 1 and 1B, the parties are not hunters or drivers, but are instead campers. Assume further that, like the hunting example discussed in Section III.A, each camper alone can cause the $90 expected harm to the victim. Assume also that each camper values the activity at $40. The analysis would be identical to that in Section III.A if each camper can take care at a cost of $35; the analysis would be identical to that in Section III.B if each can take care at a cost of $60. In either case, the incentives of the campers to take care will be reduced, their incentives to engage in a potentially harmful activity will increase, and the benefits from doing so will increase more and more as others join the activity.

[69] *See* Lennon v. Metro. Life Ins. Co., 504 F.3d 617, 623 (6th Cir. 2007) (discussing a game of Russian roulette and explaining that "at some point the high likelihood of risk and the extensive degree of harm risked, weigh[s] against the lack of social utility of the activity"); *infra* note 70 and accompanying text.

Hand formula itself is a recognition of this social policy. For this reason, courts do not prohibit such risky activities. Instead, they hold liable the tortious actors. The imposition of liability ensures that the act produces more social benefits than harms. The following example is illustrative:

> **Example 2: Polluting Factories.** A number of factories are located next to the plaintiff's property. None of the factories alone can destroy the plaintiff's property. Only if three or more factories operate without care will the plaintiff's property be harmed and destroyed. The value of the plaintiff's property is $90. Each factory expects to benefit $20 from the activity. Taking care is impossible (or too costly).

Here, producing and polluting is beneficial if *at least* five factories engage in the activity (20x5>90). A liability rule aided with a causation theory like the substantial factor doctrine can achieve this result. One, two, three, or even four factories will not engage in the activity because the expected liability of each (90, 90/2, 90/3, 90/4, respectively) will outweigh the $20 private benefit. But five factories will be better off if they all engage in the activity because each can expect a profit of $2 (20-90/5). In cases like *Tidal Oil*, courts justify the activity (even if indirectly so). They hold the actors liable, but aware of the large benefits that these activities entail, they refuse to issue injunctions that would bring them to a halt.[70] After all, in a pristine, pollution-free world, one could not drive cars, construct roads, or produce electricity.

But not all activities are equal, or so we are told. Many activities do not provide what judges and policymakers often term as *social* benefits.[71] In fact, in all of the three paradigmatic cases,

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[70] *See* Bliss v. Anaconda Copper Mining Co., 167 F. 342, 364–72 (C.C.D. Mont. 1909) (denying injunction after finding that the damage therefrom to the defendants' operation and the state of Montana would greatly exceed the damage to the plaintiff); Madison v. Ducktown Sulphur Copper & Iron Co., 83 S.W. 658, 666–67 (Tenn. 1904) (refusing "to protect by injunction [owners of] several small tracts of land, aggregating in value less than $1,000" by explaining that an injunction halting the defendants' operation would "destroy other property worth nearly $2,000,000 and wreck two great mining and manufacturing enterprises, that are engaged in work of very great importance, not only to their owners, but to the state, and to the whole country as well. . . ").

[71] Some economists have taken a similar view. *See, e.g.*, MICELI, *supra* note 32, at 75 (noting that "in some cases the benefit to the injurer of inflicting harm may exceed the cost

one can point to cases where the actors attach subjective valuations to activities that benefit only them, harm innocent third parties, and are frowned upon by society. *Summers* is a borderline case. The actors in *Summers* may have valued the activity because of the market value of the game, or because of the pure enjoyment from shooting and the act of hunting. Despite the obvious tangible and intangible benefits associated with shooting, courts have often treated shooting cases as involving a unique class of unappreciated activities.[72] Unlike in *Summers*, in many alternative liability cases the value of the risky activity to the actors could be wholly intangible and, at least outwardly, socially unappreciated. Horseplay (e.g., when actors throw erasers at each other) and paintball games[73] are examples of risky activities that confer intangible benefits—the subjective hedonic feeling generated by the game—upon the actors but no one else.[74] So is the case with the campers who can enjoy the comfort of their homes, but prefer the enjoyment of the outdoors and the warmth of a campfire in a densely wooded area. And, in a drag race, it is likely the illegal activity, the speeding or gambling, and perhaps the possibility of harming others, which generate the pleasuring effect.[75] In all of these cases, the participants engage in activities which society, at least outwardly, disapproves and which may hurt innocent third parties.[76]

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to the victim, but the benefit is not socially valuable"); Guido Calabresi, Lecture at the Annual Meeting of the American Law and Economic Association, *in Of Tastes and Values*, YALE LAW & ECONOMICS RESEARCH PAPER NO. 500, at 6–7, 22 (Aug. 2014), http://ssrn.com/abstract=2483947 (challenging the Becker-Stigler view that the economist cannot say much about the relative merits of values and tastes; arguing that, as a society we care about certain values more than others, and that identifying these fundamental values is not only possible, but also critical for lawmaking).

[72] *See* Malone, *supra* note 8, at 84 (explaining how "the law has always dealt strictly with accidental shootings"); *supra* note 63 and *infra* note 106 and accompanying text.

[73] For examples where innocent parties were injured in horseplay and paintball games, see, respectively, *infra* notes 85, 124, and accompanying text.

[74] One may argue that such games provide some tangible benefits, such as survival and shooting skills. Note also that there may be a market price for activities that confer intangible benefits to their participants, as with paintball facilities where one is required to pay a fee for the right to participate in the game.

[75] Of course some actors, like the winner, may also receive a tangible benefit (e.g., a prize).

[76] *See, e.g.*, RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 28(b) cmt. n, illus. 12 (discussing a paintball game conducted in a secluded area in which the participants injure a faultless victim).

What courts have failed to understand (or admit) is that they respect the subjective values that actors place on activities that harm others—the very subjective values that the same courts denounce as immoral and antisocial. Consider again a drag race—the classic case of a "concerted action" situation. Premised on the criminal concept of aiding and abetting, the theory of concerted action imposes liability not only on those who pursue a common plan to commit a tortious act, but also on those who furthered the tortious act by encouraging the wrongdoers.[77] The pronounced purpose of the doctrine is to satisfy the actual causation element in situations where it is clear that some of the defendants did not injure the victim (e.g., a spectator),[78] or in situations where the plaintiff cannot identify the injurer (e.g., if it is not clear which of the drivers injured the victim).[79] The reasons for imposing liability—as with the other group causation theories discussed here—are fairness to the victim and the societal distaste for the defendants' behavior. "[C]oncerted *action . . . express[es] moral condemnation* for the actions of all of the defendants, refusing to let the individuals escape from liability by claiming that their

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[77] PROSSER AND KEETON, *supra* note 10, § 46, at 323 (explaining that "the rule goes back to the early days when the action of trespass was primarily a criminal action" and that under the rule "those who lend aid or encouragement to the wrongdoer . . . are equally liable").

[78] *See, e.g.*, Marshall v. Celotex Corp., 691 F. Supp. 1045, 1047 (E.D. Mich. 1988) ("Under the concert of action theory, a person may be held liable for concerted activity which causes injury to another, though that person was not the cause in fact of the injury."); Ogle v. Avina, 146 N.W.2d 422, 426 (1966) ("In a race, the participants share equally the responsibility for damage done by any participant."); Sanke v. Bechina, 576 N.E.2d 1212, 1218 (1991) (a passenger who encourages a driver to drive carelessly may be held liable); Cooper v. Bondoni, 841 P.2d 608, 611–12 (1992) ("[A] person may be subject to liability for the resulting harm to a third person caused by the tortious conduct of another, when the non-acting person knows that the tortfeasor's conduct constitutes a breach of duty and he aids its commission by giving substantial assistance or encouragement to the tortfeasor."); Wilson v. Firestone Tire & Rubber Co., 1985 Mich. App. LEXIS 3192 (1985) ("Even if defendant caused no harm himself, he is liable for the harm caused by his fellows because all acted jointly."); RESTATEMENT (SECOND) OF TORTS § 876 (1979) cmt. d ("Advice or encouragement to act operates as a moral support to a tortfeasor and if the act encouraged is known to be tortious it has the same effect upon the liability of the adviser as participation or physical assistance."); David W. Robertson, *The Common Sense of Cause in Fact*, 75 TEX. L. REV. 1765, 1781–82 (1997) ("The concert-of-action approach was used to solve the cause-in-fact problem. . . .").

[79] *See, e.g.*,.Sindell v. Abbott Labs., 149 Cal. Rptr. 138, 144 (Cal. Ct. App. 1978) (citing Orser v. George, 60 Cal. Rptr. 708 (Cal. Ct. App. 1967)) (explaining that "the rationale of the use of that theory [is] to satisfy the element of causation in a situation where a plaintiff cannot identify the culpable defendant"), *vacated*, 607 P.2d 924 (Cal. 1980).

participation in the tort was less than that of the other defendants or that they did not themselves cause the plaintiff's injury."[80] Its "purpose . . . is . . . to deter anti-social behavior."[81]

Yet despite its benevolent goals—condemning what are framed as immoral acts and promoting fairness to victims—group causation theories like concerted action may incentivize the very acts they purport to condemn and deter. To explain how, consider a case in which, unlike Example 2 (polluting factories), the benefits to the parties would not be considered acceptable. For example, assume that in a drag race it is the illegality of the activity or the possibility of harming one that generates the value to the parties. The example is summarized below:

> **Example 1C: The Benefits from Driving Tortiously**. A number of actors consider whether to engage in a drag race. Each expects a $40 benefit provided the activity is tortious. The expected harm is $90.[82]

Here, a drag race with two drivers is clearly undesirable. It brings a total benefit of $80 (40x2), but it inflicts an expected cost of $90. Concerted action seems initially to align the actors' incentives with society's. Neither driver will engage in the activity because her private benefit, $40, is outweighed by the expected liability of $45 (90/2). But, suppose the party consists of three individuals (for example, two drivers and a spectator). Now the law of actual causation makes an illegal, condemned activity worthwhile. Because concerted action theory holds everyone

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[80] RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIAB. § 15 reporters' note, cmt. a (AM. LAW INST. 2000) (emphasis added); *see also* Bierczynski v. Rogers, 239 A.2d 218, 221 (Del. 1968) (holding that it could be inferred from the circumstances that the defendants had agreed to engage in a car race, an activity prohibited by law in many states); Hood v. Evans, 126 S.E.2d 898, 900 (Ga. Ct. App. 1962) (imposing liability on a non-driver who had signaled the start of the race); Hanrahan v. Cochran, 12 A.D. 91, 94–95 (N.Y. App. Div. 1896) (noting that the horse racing in a crowded street was a criminal act and holding a defendant who "did not actually" injure the victim liable).

[81] Lyons v. Premo Pharm. Labs, Inc., 406 A.2d 185, 190 (N.J. Super. Ct. App. Div. 1979). *See also* Abel v. Eli Lily & Co., 343 N.W.2d 164, 176 n.19 (Mich. 1984) (noting that concerted action "seems to have developed to deter hazardous group behavior").

[82] Example 1C is identical to Example 1B in that, in both, taking care is not an option. The difference is that in Example 1B the cost of taking care, $60, outweighed the benefit from taking care, $40; in Example 1C taking care will render the activity valueless (i.e., the activity will be so dull as to confer no benefits upon the participants).

(drivers and spectators) liable in case of an injury, if all partake in the activity, each will have an expected liability of $30 (90/3) and can thus expect a net gain (40>30).

What some may find surprising is that, despite lip service to the contrary, the law prefers the actors' subjective enjoyment from engaging in a condemned activity over the victim's interest in being free from harm. In that sense, group causation theories like concerted action fit well within the traditional tort framework. They provide wrongdoers with a license to harm so long as the subjective benefits to the injurers from harming outweigh the damage to the victim. The price of the "license" (in the form of the expected judgment) can be quite cheap: $30 (90/3) in the above example. And, the more actors that engage in the activity, the cheaper the license to harm becomes.

Courts and scholars seem to have missed this point. Consider, for example, the following excerpt from Judge Posner's decision in *Boim*, a case decided under the Anti-Terrorist Act, but according to tort law principles:

> As we explained in *United States v. Boyd*, 475 F.3d 875, 877 (7th Cir. 2007) [a criminal case], "firing multiple shots from a powerful gun . . . in the downtown of a large city at a time when pedestrians . . . are known to be in the vicinity creates a risk of harm that, *while not large in probabilistic terms*, is 'substantial' relative to the gratuitousness of the defendant's actions. . . . An activity is reckless when the potential harm that it creates . . . is wildly disproportionate to any benefits that the activity might be expected to confer. . . . *The emotional gratification that defendant Boyd derived from shooting into the night, though perhaps great, is not the kind of benefit that has weight in the scales when on the other side is danger to life and limb, even if the danger is limited, as it was here.*"[83]

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[83] Boim v. Holy Land Found. for Relief & Dev., 549 F.3d 685, 695 (7th Cir. 2008) (holding, en banc, that financial contribution to a terrorist group constitutes an act of terrorism under the Anti-Terrorist Act, 18 U.S.C. §§ 2331(1), 2333 (2012)) (second emphasis added).

The claim that the "emotional gratification" of the defendant is not a benefit that the law considers in the scales of justice may be true in the criminal justice system where liability is not diluted. Indeed, if two actors shoot recklessly and hit a third, in many jurisdictions each will be subject to the same penalty regardless of whether she was the actual shooter. Of course, the parties may still elect to engage in the activity if they believe that the benefit from the criminal act outweighs the expected cost, but their criminal liability is not diluted because other criminals join them.[84] It is also true that in tort cases, courts ignore such private benefits when they determine, using the Learned Hand formula, whether an actor breached her duty to the defendant. Tort law, however, does *not* ignore the actors' subjective pleasure from harming another. *Keel v. Hainline* is illustrative.[85] In *Keel*, forty junior high school students showed up for class but their instructor did not. While waiting for the instructor, some of the students engaged in what they termed "horse play." This included throwing chalk, wooden blackboard erasers, and other instruments at each other. The activity took place for thirty minutes until one of the students who did not participate in the fight was injured in her eye by an eraser thrown by Jennings. There was no ill intent. The court found that the students merely intended to strike each other "in sport" and "without intent to [injure]."[86] Relying on concerted action theory, the court held liable all those who participated in

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[84] In fact, crimes like felony murder may even increase the actors' individual liability as others join the group. For example, if *A* decides to rob a bank she will be criminally liable for robbery. Assume now that *A*, the original robber, decides to get some help and rob together with a fellow criminal. If *A*'s associate, unbeknownst to her and even against her explicit will and instructions, kills someone during the robbery, even accidently, *A*, the non-shooting robber, may be held criminally liable for felony murder as well as robbery. In contrast, in tort cases, even if the total expected liability increases with the number of tortfeasors, the individual liability is nevertheless a function of $D/n$ (where $D$ is the total expected harm and $n$ is the number of tortfeasors) and may thus decline. *See, e.g.*, RESTATEMENT (SECOND) OF TORTS § 876 cmt. d, illus. 10 (AM. LAW INST. 1979) (when "A and B conspire to burglarize C's safe" and B, "without A's knowledge of his intention to do so, burns the house in order to conceal the burglary," both A and B are liable for the conversion of the contents as well as the destruction of the house).

[85] Keel v. Hainline, 331 P.2d 397 (Okla. 1958).

[86] *Id.* at 399.

the horseplay.[87] This included Keel, who did not throw anything but only retrieved erasers and handed them to others.[88]

Holding defendants like Keel—who clearly did not injure the victim—liable is unlikely to deter actors from taking part in such unappreciated "pastime" activities.[89] If each participant values the horseplay at $40, and the expected damage is $90, participating in the game is worthwhile so long as there are at least three participants (40>90/3). The game is more enjoyable (and thus more enticing) as the number of participants increases. While with three participants each enjoys a net value of $10 (40-90/3), with ten participants the enjoyment more than triples to $31 (40-90/10). *Keel* and other concerted action cases are examples of how the law *respects* private valuation of parties engaging in activities it ostensibly holds to be unacceptable or immoral.

*Boim* exemplifies even further what some may consider a perverse outcome of group causation theories like concerted action.[90] The plaintiffs in *Boim* were the parents of a Jewish teenager killed in a terror attack in Israel by Hamas terrorists. The suit, brought against Islamic charities, claimed that their financial support to Hamas constituted an act of terrorism under the Anti-Terrorism Act (ATA). In an en banc opinion written by Judge Posner, the Seventh Circuit Court of Appeals agreed. It held that the plaintiff only has to show that (a) the defendant provided material support; (b) to a terrorist organization; (c) knowing (or with recklessness or indifference as to the fact) that the ultimate recipient carries out violence.[91]

Importantly, relying on tort law's concerted action theory,[92] the court found the plaintiff does not have to show a causal link between the contribution and the activities of the terror organization.[93] The court explained that civil "suits against

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[87] *Id.* at 400.

[88] *Id.* ("Keel aided and abetted the wrongful throwing by procuring and supplying to the throwers the articles to be thrown.").

[89] *Id.* at 399 (explaining that horseplay is not "an innocent and lawful pastime, even though done in sport and without intent to injure" and holding that "[s]uch conduct is wrongful").

[90] Boim v. Holy Land Found. for Relief & Dev., 549 F.3d 687 (7th Cir. 2008).

[91] *Id.* at 693–94.

[92] *Id.* at 692 ("[P]rudence counsels us . . . [to] analyze the tort liability of providers of material support to terrorism under general principles of tort law.").

[93] *Id.* at 697.

financiers of terrorism can cut the terrorists' lifeline"[94] and serve "as a counterterrorism measure."[95] The belief that concerted action theory can deter financiers of terrorism by imposing on them civil liability is overly optimistic. By now you should be able to see that it may actually *encourage* terrorism supported by a large base, a "terror-fest." Assume each financier values the terrorist organization's harmful activities at $200,000 (measured by the maximum amount she is willing and able to donate) and that the expected loss to American citizens located in the terrorists' area of operation (Israel in the case of *Boim*) as a result of the group's operations is $10 million. Concerted action theory only means that, if more than fifty entities contribute to the terror-group, then contributing, at least in the eyes of the donors, is worthwhile (200,000>10M/51). It also means that the net subjective benefits from contributing (in the form of allowing the terrorists to further their goals) increase with the number of contributors. For example, with 100 contributors, the expected liability of each is only $100,000 (10M/100), which means that for those making contributions, contributing was ultimately worthwhile.

Imposing liability for such acts is necessary, but it is important to understand that it may not be enough given the dilution. The ATA, it should be noted, imposes automatic treble damages.[96] Punitive damages can indeed deter. But, punitive damages have a limited effect.[97] In the above example, treble damages may not deter those who are willing to support terror-groups if the number of contributors is larger than 150 (200,000>3x10M/151), or if each contributor values the terrorists' harmful activity more than $600,000 (600,001>3x10M/50). The ATA's imposition of punitive damage is a move in the right direction. Punitive damages serve as an anti-dilution mechanism.[98] But to make this mechanism effective, the law should allow punitive damages to be adjusted upwards as the number of contributors increases.[99] Still, the

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[94] *Id.* at 691.

[95] *Id.* at 690.

[96] *Id.* at 692.

[97] Dillbary, *supra* note 24, at 978.

[98] *Id.* ("Punitive damages, if set high enough, would serve as an effective anti-dilution mechanism. . . .").

[99] *Id.* Of course, the effectiveness of punitive (or any) damages is also dependent on the ability of the defendant to pay such damages.

defendants in *Boim* may be deterred from donating to a terror organization because of the criminal liability imposed upon them. But, if criminal liability does not produce the desired effect, civil liability may reinforce the deterrence effect if it is not overly diluted.

## IV. CAUSATION ACTUALLY

### A. CAUSATION ACTUALLY AND THE BUT-FOR TEST

The theory pressed in this Article also reveals that courts and scholars have been too quick to concede that actual causation is "relaxed" or abandoned in the three paradigmatic cases. *In deviation from the prior literature, this Article argues that in many of these cases the conduct of each of the non-injuring actors was either the actual cause of the victim's harm or, for policy reasons, should be treated as such.*

The main test for determining whether the defendant's conduct was the actual cause of the victim's harm is the but-for (or *sine qua non*) test.[100] It asks whether the harm would not have occurred but for the defendant's misconduct.[101] The test implies that the defendant's tortious conduct is a *necessary* condition for the harm.[102] Courts and scholars have long concluded that the but-for test fails miserably in situations involving multiple actors.[103] The claim is that neither the spectator in a drag race, nor the campers who carelessly set the merging fires, nor the shooter who did not injure Summers, were *necessary* for the victim's harm. The harm, it is argued, would have occurred regardless of whether these actors engaged in the activity. In other words, in each of these cases, the victim's fate was already determined with or without the acts of these defendants—or at

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[100] *See* PROSSER AND KEETON, *supra* note 10, § 41, at 266.

[101] *Id.*

[102] *See, e.g.*, RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 26 cmt. b ("[A] factual cause can also be described as a necessary condition for the outcome."); PROSSER AND KEETON, *supra* note 10, § 41, at 265 ("An act or an omission is not regarded as a cause of an event if the particular event would have occurred without it.").

[103] *See, e.g.*, PROSSER AND KEETON, *supra* note 10, § 41, at 266 (arguing that the but-for test "fails" when multiple sufficient forces concur to bring about the harm); MICELI, *supra* note 32, at 40 (describing the difficulties presented when applying the but-for test in cases with multiple causes); *See supra* note 8 and accompanying text.

least that is how courts and scholars approach the issue.[104] This widely accepted description is faulty.

*1. A Non-Injurer Actor Can Be a But-For Reason for the Harm.* To begin with, in some cases the harm would not have occurred but for the participation of those who did not actually injure the victim. To see this, consider the following alternative liability example—a modified version of Example 1B[105] above:

> **Example 1D: Alternative Liability (Hunting).** A and B consider whether to hunt. Each expects a $50 benefit. The expected harm to the victim is $90. The cost of care is $60.

Neither *A* nor *B* would hunt alone. Hunting brings a private benefit of $50, but would cost $60 if the actor takes care, or $90 if she does not.[106] Hunting together, however, is worthwhile. Because alternative liability dilutes the expected judgment to $45 (90/2), the actors' best-case scenario (and the socially desirable result[107]) is that neither take care (45<60). In this situation, each would enjoy a surplus of $5 (50-90/2).

Now assume that the parties acted in their mutual best interests (i.e., carelessly) and, as a result, *A* shot and injured the victim. Although it was *A* who physically injured the victim, *B* was equally at fault. *Indeed, but for B's careless participation, A would not have carelessly engaged in the activity and would not have injured the victim.* In other words, but for the non-injuring party—here, the party who *missed* the victim—the victim would

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[104] *See supra* notes 1–6 and accompanying text; *infra* Section IV.

[105] *See supra* p. 21.

[106] This assumes the activity is subject to a liability rule such as strict liability. *See* Malone, *supra* note 8, at 84 (explaining that "where the misuse of firearms is involved, courts are willing to hold the defendant [liable] for almost any consequence" and noting that the "requirement of fault is paid little more than lip service"); *see also* Wood v. Groh, 7 P.3d 1163, 1168–69 (holding that firearms are inherently dangerous and imposing a higher standard of care on those having ownership or control of a firearm). For previous examples showing that a non-injuring party can be a but-for cause of the harm under a negligence regime, compare *supra* notes 20–21, 41–43, and accompanying text (discussing Example 1 in the context of a drag race subject to concerted action theory), with notes 60–62 and accompanying text (discussing Example 1 in a hunting scenario subject to alternative liability).

[107] Assuming one is willing to give weight to the hunters' private benefit, total welfare will increase by $10 (50x2-90), compared to a welfare loss of $20 (40x2-60) if both hunters take care and no benefit if the parties avoid the activity altogether.

not have been injured at all. The conclusion is that the conduct of each hunter is necessary to bring about the harm. Each is an actual cause of the harm. The conclusion stands in direct contrast to Posner and Shavell's insight that in *Summers* "neither hunter could be said to be a cause in fact of the injury."[108]

*2. The Tortious Conduct of Every Actor in a Large Group Is a But-For Cause of the Harm Even if the Harm Could Be Caused by a Smaller Group.* Sometimes, even absent any one specific actor, the injurer would have engaged in the harmful activity. One reason is that even if participation by a small number of actors, $m$, is necessary to bring the harm, it could be that the $m$ individuals will not engage carelessly in the activity unless joined by others. To illustrate, recall Example 2[109]—a concurrent cause scenario—summarized below for convenience.

> **Example 2: Concurrent Causes (Pollution).** The pollution released by each factory is too small to harm the nearby plaintiff's property. But if three or more factories operate without care, the plaintiff's property will be harmed and destroyed. The value of the plaintiff's property is $90. Each factory expects to benefit $20. Taking care is impossible (or too costly).

Three factories could operate, pollute, and destroy the lake, but they would not do so. This is because, if the three factories operate, each can expect a net loss of $10 (20-90/3). In fact, no factory will be willing to operate unless it is part of a group of five (or more) factories, in which case it can expect a net gain of $2 (20-90/5). The result is also socially desirable (20x5>90). Importantly, *each of these five factories is a but-for cause of the harm because the activity would not take place if only four factories were present.* More formally, the claim is that even if the actions of a minimum of $m$ actors (here, $m$=3) are necessary to harm the victim, it is still *necessary* that $n^*>m$ actors (here $n^*=5>m=3$) participate for the activity to take place.

*3. Heterogeneous Valuations: Cases Where the Injurer Places a Low Value on the Activity and Would Decline to Engage in the*

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[108] Shavell, *supra* note 34, at 494; *see also* POSNER, *supra* note 11, at 212; *supra* notes 38–40 and accompanying text.

[109] *See supra* p. 22.

*Activity Unless Joined by a Sufficiently Large Group of Non-Injurers.* Recall Example 2 above but assume now that the parties are individuals who consider whether to participate in a drag race (instead of polluting factories).

> **Example 3: Concerted Action (A Drag Race).** Six actors consider whether to engage in a drag race (as drivers, passengers or spectators). Five of them, call them *D1–D5*, value the careless driving at $20. A sixth actor, *D6*, values the activity at $16. The expected harm to the victim is $90. Taking care is impossible.[110]

*D6* will not join the activity even if she is invited by four of the other five individuals (*D1–D4*).[111] The expected liability of $18 (90/5) will outweigh her benefits (16<18). But, together with the other five, drag racing becomes a winning proposition. The reason is that a group causation doctrine like concerted action will hold all six actors liable, thereby reducing the expected liability of each to $15 (90/6).[112] Now, *D6* can expect a gain (16-15>0). If *D6* was the one who physically harmed the victim, then each of the other five participants, *D1–D5*, was also a necessary or but-for cause of the harm. *Indeed, it was only because D1–D5 tortiously engaged in the activity that D6, the injurer, elected to join the party.*

*4. No One Specific Actor Seems to Be Necessary for the Harm but Everyone Is (a But-For Cause) or Reinforces the Decision to Behave Tortiously.* Still, in some cases, it seems that no one actor

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[110] The activity is tortious if, for example, we assume that it is subject to strict liability. Liability may be imposed even under a negligence regime. Assume, for example, that the cost of care is $30. In such a case neither actor will take care (20<30). One may argue that in the latter case acting carelessly does not constitute a breach of a duty to take care because the total benefits to the actors outweigh the cost to the victim (20x5+16>90). Still, a court will likely hold each of the actors liable because of the individual nature of the cost-benefit analysis conducted by the court (each factory could have avoided the $90 harm if it were to invest $30 on precaution). *See supra* Section III.A; *supra* note 64. The result will not change if instead of individuals who consider to participate in drag racing the actors were campers, each of whom could alone set a fire that would destroy the victim's cabin. In such a case, substantial factor theory would have the same effect as concerted action theory.

[111] Note that with *D1–D4* and *D6*, the activity is net beneficial (20x4+16>90) so, theoretically, if the parties could, they would enter into a benefit-sharing agreement. However, a mere invitation would not suffice to entice *D6* assuming that the actors will be held liable.

[112] *See supra* notes 15–18 and accompanying text.

is the actual cause of the harm, but, in fact, everyone is or—at the very least—everyone reinforces each actor's decision to partake in the tortious activity. To see this, consider a variation of the above example, with one exception: assume that everyone places the same value on the activity. For convenience, the modified example is summarized below:

> **Example 4: No One Actor Seems to Be Necessary for the Harm.** Ten actors consider whether to engage in a certain tortious activity (e.g., drag racing, careless camping, or hunting). Each values the activity at $20. The expected harm to the victim is $90. Taking care is impossible.

Note first that four actors will not engage in the tortious activity because each can only expect a loss (20-90/4<0). With five actors, things change. As part of a group of five actors, each can expect to pay less: only $18 (90/5) and therefore gain $2 (20-18) from the careless activity.

But what if six or more actors engaged in the careless activity? How can it be said that the conduct of each actor in the *larger* group, for example ten actors, is a but-for cause of the victim's harm when only five are necessary to cause each to engage in the activity that wreaked havoc? Here, it is important to recall that with each additional actor, each participant can expect a higher profit.[113] For example, while with five actors each can expect a $2 gain (20-90/5), with six actors the expected gain reaches $5 (20-90/6), and with ten actors it reaches $11 (20-90/10). The higher profit margin does at least two things. First, it reinforces the decision of each actor to engage in the tortious activity (i.e., to drag race, pollute, or hunt tortiously). Second, the higher profit margin incentivizes those who have high opportunity costs to join the tortious activity. For example, assume that each actor values a different activity (e.g., sun bathing) at $10.50. Five actors will not engage in the tortious activity because the competing activity promises a higher gain (10.50>2). Nor would six, seven, eight, or nine actors. Only if ten or more actors engage in the tortious activity will it be profitable enough to convince the parties to forgo

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[113] *See supra* note 68 and accompanying text.

the competing activity (20-90/10>10.50). In other words, if ten actors engage in the tortious activity and one (or more) injured the victim, each of the ten tortious actors is a but-for reason for the harm.[114]

| Example | Description |
|---|---|
| 1D | But for the tortious behavior of the non-injuring party, the injuring party would not have engaged tortiously in the activity, and the victim would not have been harmed. |
| 2 | But for the tortious behavior of each of $n$ actors, the victim would not have been harmed, although the combined actions of $m$ ($m<n$) actors can injure the victim. |
| 3 | But for the tortious behavior of each of the non-injuring parties, the low value injurer would not have participated tortiously in the activity, and the victim would not have been harmed. |
| 4 | But for the tortious behavior of each of the non-injuring parties, the injurer with low opportunity costs would not have engaged tortiously in the activity, and the victim would not have been harmed. The increased gain from additional actors reinforces the parties' decisions. |

Table 2: A Summary of Examples 1–4

For all of the reasons discussed in Examples 1–4 (summarized in Table 2 above), group causation theories treat *each* actor as if she were the marginal actor that brought the total number of actors to the threshold, $n^*$. That is, each actor is treated *as if* she was the one that diluted the actual injurer's liability enough to entice the injuring party to engage in the activity that resulted in an accident. Thus, although one party physically injured the victim or her property, all actors caused the victim's injury in the sense that, but for their tortious individual behaviors, the injury would not have occurred. The emphasis is on the *possibility* that all actors are a but-for cause, because there can be situations where some of the actors are clearly not necessary to bring about the harm—this is the subject of the next (and final) example.

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[114] The extra profit margin also incentivizes risk-averse actors to join the activity. The model thus far assumed that actors are risk-neutral. The assumption is reasonable so long as a vibrant insurance market exists. But if some actors are risk-averse, they may require a higher rate of return to be persuaded to engage in the risky activity. This will happen if a large enough number of liable actors join the activity. *See also infra* Section VI.5.

*5. The Conduct of Neither Actor is a But-For Cause, yet the Conduct of Every Actor Should Be Presumed to Be the Actual Cause.* Consider the following example.

> **Example 5: No One Actor Is Necessary for the Harm.** Each of *A* and *B* values a certain tortious activity at $20. The expected harm to the victim is $5. Taking care is impossible.

Here, each actor would engage in the activity that would give rise to liability even if she were the only one to do so for an expected gain of $15 (20-5). Thus, if one of the actors injured the victim, the injurer alone is a (but-for) cause of the harm. But what if two actors injured the victim at the same time inflicting an indivisible harm, as in the case where both tortiously shot and hit the victim or set fires that merged and destroyed her cabin? No one actor seems to be necessary for the harm. Indeed, *A* would have engaged in the tortious activity regardless of *B* (20>5). And, for the same reason, *B* would have engaged in the activity regardless of *A*.

Still, one can argue that in the cases discussed here, each actor should be *presumed* to be a but-for cause of the harm. The reason is based in policy. Courts simply cannot distinguish cases where the conduct of each actor is a but-for cause of the harm, as shown in Examples 1–4, from cases where neither actor is a but-for reason from the harm, as is the case in Example 5. To be able to distinguish between these cases, courts will have to determine: (a) the subjective value the tortious actors place on the wrongful activity (e.g., whether it is $20, $16, etc.); and (b) the subjective value the tortious actors place on competing activities (e.g., sun bathing) that constitute the wrongdoers' opportunity costs. Courts cannot determine subjective valuations. Even if courts attempted to do so (an attempt that is destined to fail), the result would be a fatal moral hazard. A defendant will always try to argue that she would not have acted the way she did but for the others' tortious actions. This could chill welfare-enhancing activities or result in wasteful investment in care.

One possible solution—the one adopted by courts—is to shift the burden in all of these cases to defendants.[115] The solution requires defendants to show that their activity was not a but-for cause of the victim's harm.[116] Overcoming the presumption that results from the burden shifting may seem—and probably is—an insurmountable task. If what underlies the presumption is the plaintiff's inability to prove that a tortious actor was a but-for reason for her harm, it could be equally impossible for defendants to exculpate themselves.[117] This means that the spectator in the drag race, the campers who carelessly set fires that merged, and the hunter who missed Summers will all be held liable.

While it is true that the presumption imposed on tortious defendants is likely to be impossible to rebut, this is not a serious concern for at least three reasons. First, tort law limits the pool of actors that are subject to group causation theories. In concerted action, the pool is limited to those actors who agreed with, incited, and encouraged the injurers.[118] In concurrent causes cases, the pool of defendants is limited to those who physically contributed to the harm (examples include polluting factories as in *Tidal Oil* or tortious actors whose fires merged).[119] And, in alternative liability, the pool may be even more limited.[120] Second, each of the injuring and non-injuring actors behaved tortiously. Finally, and perhaps more importantly, the imposition of liability fulfills two functions: it compensates the victim and incentivizes the actors to engage tortiously in the activity when doing so is welfare enhancing. The actors who behave tortiously take the risk that

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[115] *See* Summers v. Tice, 199 P.2d 1, 5 (Cal. 1948) (shifting the burden to defendants).

[116] *See id.* at 4 (arguing that each of the defendants has the burden to prove that the other's behavior was the sole cause of the victim's harm).

[117] *Compare Summers*, 199 P.2d at 4 (arguing that "defendants are in a far better position [than the plaintiff] to offer evidence to determine which one caused the injury"), *with* Geistfeld, *supra* note 14, at 473 ("But neither defendant in *Summers* had better access to the evidence than the plaintiff. . . ."), *and* Donald G. Gifford, *The Challenge to the Individual Causation Requirement in Mass Products Torts*, 62 WASH. & LEE L. REV. 873, 901 (2005) (arguing that the "realistic effect" of burden shifting doctrines like the one announced in *Summers* "has been to impose liability [on the defendants] without proof of individual causation because, in actuality, neither the plaintiff nor the defendant can prove which injurer's acts caused [the victim's harm]").

[118] *See* RESTATEMENT (SECOND) OF TORTS § 876; RESTATEMENT (THIRD) OF TORTS: APPOINTMENT OF LIAB. § 15 reporters' note, cmt. a (AM. LAW INST. 2000) (discussing the scope of liability under concerted action theory).

[119] RESTATEMENT (SECOND) OF TORTS § 432(2) (AM. LAW INST. 1965).

[120] *Id.* § 433B.

their actions would place them under such a burden. They will thus engage in the activity if they value the activity more than its expected cost (as in Example 5), or if they expect to be part of a larger group and thus anticipate that their liability would be diluted enough to justify their actions (Examples 1–4). In either case the result is justified on economic grounds. It also leaves the ultimate decisions of whether to act and how much care to take with the tortious injurer—the party who is in the best position to make these decisions.

Such an impossible presumption is not foreign to tort law. In fact, courts use such a presumption when they apportion damages. The issue arises when multiple actors cause the victim an indivisible harm. Regularly, the plaintiff has the burden to prove not only that she was harmed, but also the extent of the harm caused by each defendant. When the harm is divisible, the mission is simple. But when the harm is indivisible (as in the case of merging fires), insisting on requiring the plaintiff to divide an indivisible harm would doom her case. For this reason, in cases of indivisible harm, courts shift the burden of proof to the defendants.[121] Courts not only explicitly admit that they impose an impossible burden, but they also analogize the problem to the two-fire hypothetical where injurers would escape liability if they are allowed to rely on what is believed to be a failing but-for test:

> Nobody doubts that if two tortfeasors contribute to a single loss, each is liable in solido. This result is however scarcely logical so long as the injured person has the burden of showing that the tortfeasor whom he pursues caused the damage and how much he caused. On the other hand, since it is *impossible* to prove what share the act of either of the tortfeasors contributed, or whether it contributed any at all, if this prevailed, each would escape—an absurd result. To overcome this difficulty, the law imposes upon each tortfeasor the *impossible* burden of proof. . . . *The situation is the same when one of the two contributing factors is not the*

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[121] *Id.* § 433B(2); RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 28 (shifting the burden of proof as to the apportionment to the tortious actors who exposed the victim to a risk of harm); DAN B. DOBBS, THE LAW OF TORTS § 168, at 410, § 174, at 423 (2000); PROSSER AND KEETON, *supra* note 10, § 52, at 345.

> *result of an actionable fault: again, the single tortfeasor cannot be allowed to escape through the meshes of a logical net. He is a wrongdoer; let him unravel the casuistries resulting from his wrong.*[122]

Not surprisingly, the *Summers* court—the oft cited case for alternative liability—drew the exact same analogy:

> [I]t should be pointed out that the same reasons of policy and justice shift the burden to each of defendants to absolve himself if he can—relieving the wronged person of the duty of apportioning the injury to a particular defendant, apply here where we are concerned with whether plaintiff is required to supply evidence for the apportionment of damages. If defendants are independent tort feasors and thus each liable for the damage caused by him alone, and, at least, where the matter of apportionment is *incapable of proof*, the innocent wronged party should not be deprived of his right to redress. The wrongdoers should be left to work out between themselves any apportionment.[123]

Finally, the presumption suggested here might seem odd, but only because it is framed as such—that is, as a presumption. Indeed, concerted action, substantial factor, and alternative liability theories can be viewed as presumptions of a but-for nexus that courts are willing to apply in limited settings (situations where these group theories are applicable).

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[122] Navigazione Libera Triestina Societa Anonima v. Newtown Creek Towing Co., 98 F.2d 694, 697 (2d Cir. 1938) (emphasis added) (internal citations omitted); *see also* RESTATEMENT (SECOND) OF TORTS § 433B(2) cmt. d (AM. LAW INST. 1965) ("The reason for the exceptional rule placing the burden of proof as to apportionment upon the defendant or defendants is the injustice of allowing a proved wrongdoer . . . to escape liability . . . .").

[123] *Summers*, 199 P.2d at 5 (emphasis added); *see also* Wright, *supra* note 9, at 1300–01 (relying on a fairness rationale and arguing that in apportionment and alternative causes cases "the shift of the burden of proof . . . to the defendants is warranted as an implementation of interactive justice").

B. THE SUBSTITUTION HYPOTHESIS

The theory pressed in this Article offers a unified explanation for the three paradigmatic cases. But if the three paradigmatic cases are as similar as this Article claims, one would expect courts, at least on the margins, to treat them as interchangeable. There is indeed evidence that courts are willing to substitute one group causation theory for another. Consider, for example, the following hypothetical. Suppose *A* and *B* play paintball in a secluded area and ask *C* to warn them if someone approaches. *C* notices an innocent party, *V*, and warns the players, but *A* and *B* decide independently, while aware of each other's decision, to ignore the warning and shoot at each other simultaneously. One of them, although it is not clear who, hits *V*. The *Restatement (Third)* explains that *A* and *B* may be liable under alternative liability theory.[124] One could also argue that the parties engaged in concerted action. Although the common plan—a game of paintball—was not intended to harm another, it was nevertheless pursued with disregard to the bodily and property interests of third parties. It is thus not different than the horseplay in *Keel*,[125] or the drag race that involves participants who enjoy the thrill of the ride, but do not intend to harm anyone.[126]

In fact, many courts have taken the view that in such cases the plaintiff can recover under a theory of concerted action, alternative liability, or both.[127] *McMillan ex rel. McMillan v. Mahoney* is such a case.[128] In *McMillan*, the two defendants were shooting air rifles next to the plaintiffs' home without any intention to injure anyone.[129] One of them hit the victim, but it was impossible to

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[124] *See* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 28(b) cmt. d, illus. 12 (discussing the above example).

[125] *See* Keel v. Hainline, 331 P.2d 397, 399–400 (Okla. 1958) (noting that although the defendants did not act with the intent to harm, their actions were dangerous and therefore "wrongful" and holding liable all participants, including Keel, even though his actions were "limited to the retrieving of such erasers and handing them to other defendants for further throwing"). *See also supra* notes 85–89 and accompanying text.

[126] *See supra* p. 5.

[127] *See, e.g.*, McMillan *ex rel.* McMillan v. Mahoney, 393 S.E.2d 298, 300 (N.C. Ct. App. 1990) (reviewing such decisions and concluding that "[n]umerous cases from other jurisdictions allow a plaintiff to recover either under [alternative liability] theory, under a theory of 'acting in concert,' or under some combination of the two").

[128] *Id.* at 301.

[129] *Id.* at 299.

determine who.[130] The defendants filed a motion to dismiss, arguing that "the complaint is fatally defective in that it fails to allege concerted action and the facts as stated clearly indicate that only one of the minor defendants actually caused the injury for which plaintiffs seek recovery."[131] In a case of first impression, the Court of Appeals of North Carolina rejected the motion to dismiss and found that the plaintiff could recover under a theory of concerted action, alternative liability, or both.[132]

Famous examples of two courts applying different group causation theories to near identical situations are *Oliver v. Miles*[133] and *Summers v. Tice*.[134] In *Oliver*, Shamburger and Oliver drove to the countryside to hunt birds. Shortly after their car passed Miles, they stopped to shoot at a covey of partridges.[135] When the birds flew over their heads and across the public highway, they simultaneously shot at the birds. One of the hunters struck Miles's eye. Unable to identify the actual shooter, the court held both liable based on a concerted action theory.[136] "To hold otherwise," the court explained, "would be to exonerate both from liability."[137] The *Summers* court took a different approach. Like the court in *Oliver*, it held the two careless hunters liable, but it noted that using concerted action theory would be "straining that concept."[138] Instead, *Summers* fashioned what is now known as alternative liability to achieve the same result, explaining that the "real reason . . . is the practical unfairness" to the victim.[139] "If one can escape [liability] the other may also and plaintiff is remediless."[140]

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[130] *Id.*

[131] *Id.* at 300.

[132] *See id.* at 301 ("[U]nder the recognized tort theories discussed above [i.e., alternative liability and concerted action] the complaint alleges facts sufficient to give defendants notice of the theory under which plaintiffs are proceeding.").

[133] Oliver v. Miles, 110 So. 666 (Miss. 1926).

[134] Summers v. Tice, 199 P.2d 1 (Cal. 1948).

[135] *Oliver*, 110 So. at 667.

[136] *Id.* at 668 ("We think that they were jointly engaged in the unlawful enterprise of shooting at birds flying over the highway; that they were in pursuit of a common purpose; that each did an unlawful act, in the pursuit thereof; and that each is liable for the resulting injury to the boy, although no one can say definitely who actually shot him.").

[137] *Id.*

[138] *Summers*, 199 P.2d at 3.

[139] *Id.*

[140] *Id.* at 4.

The similarity between the different group causation theories (and the rhetoric that courts used to justify them) is further exemplified in *Moses v. Town of Morganton*—a concurrent causes case.[141] *Moses* involved three defendants that, although acting independently, were aware of each other's actions. Two of the defendants discharged waste into a creek above the plaintiff's land.[142] The third defendant built a dam in a different location, which caused the water in the creek to back up, resulting in a deposit of the discharged waste onto the plaintiff's land.[143] Importantly, the court found that each of the defendants acted independently and without agreement.[144] Yet, it held each liable based on what is viewed as concerted action theory:[145]

> If parties, although acting independently, know, or have reasonable ground to believe, that their independent acts, combining with the independent acts of others, will create a result that will become a nuisance, and they do so causing damage, they become as it were joint wrongdoers ab initio, and are liable as joint tort-feasors. Where all have knowledge of the independent acts that create the result and continue the independent acts with knowledge, *this ipso facto creates a concert of action* and makes a common design or purpose. Any other position . . . would make plaintiffs practically remediless, although there is *a nuisance which all jointly concurred in and contributed to,* that is alleged made the plaintiffs' land valueless,

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[141] Moses v. Town of Morganton, 133 S.E. 421 (N.C. 1926). For a critical view of *Moses*, see PROSSER AND KEETON, *supra* note 10, § 46, at 323 (arguing that *Moses* is a concerted action case which requires an actual agreement and that "mere knowledge by each party of what the other is doing" is not enough). However, for a response, see generally J. Shahar Dillbary, *Tort-tracting* (work in progress) (on file with author) (explaining that the criticism is unwarranted).

[142] *Moses*, 133 S.E. at 421.

[143] *Id.*

[144] *See id.* at 422 (finding that the parties "acted independently, without concert or collusion and not in pursuit of any common design").

[145] PROSSER AND KEETON, *supra* note 10, § 46, at 323.

> and but for such joinder the injury would not have occurred.[146]

The *Moses* court's reliance on deterrence and fairness to allow recovery for an otherwise remediless victim is identical to that in *Summers*, *Oliver*, and *Keel*.[147] And, for this reason it is wrong. Group causation theories like concerted action, substantial factor, and alternative liability theory serve as a dilution mechanism. They may thus encourage, not reduce, accidents. But, the *Moses* holding is correct in emphasizing the fact that the parties' actions "concurred" and "contributed" to the harm.[148] The facts in *Moses* are quite similar to the facts of *Tidal Oil*—another concurrent causes case.[149] And in both cases, tort law, with the aid of a group causation theory, imposed liability on all actors and then diluted it, thereby encouraging the parties to pursue the tortious activities.[150]

### C. TORT LAW AND CRIMINAL LAW

Thus far, for the ease of exposition and exposing the dilutive effect of group causation theories, this Article has ignored the effects of the criminal system on the actors' behaviors. In many cases the same acts or omissions can give rise to both criminal and civil liability. Substantial factor theory, for example, may be used to establish causation and hold liable those who set fires that destroyed the victim's cabin, although the same acts may give rise to criminal liability. In *McMillan*,[151] the court held that

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[146] *Moses*, 133 S.E. at 423 (emphasis added); *see also* Warren v. Parkhurst, 92 N.Y.S. 725, 727 (N.Y. Sup. Ct. 1904) ("[W]hile each defendant acts separately, he is acting at the same time in the same manner as the other defendants, knowing that the contributions by himself and the others acting in the same way will result necessarily in the destruction of the plaintiff's property. If necessary, in order to get at them, a court . . . may infer a unity of action, design, and understanding, and that each defendant is deliberately acting with the others in causing the destruction of the plaintiff's property."), *aff'd*, 93 N.Y.S. 1009 (N.Y. App. Div. 1905), *aff'd*, 78 N.E. 579 (N.Y. 1906).

[147] *See supra* notes 85–89, 133–37, 138–40 and accompanying text.

[148] *Moses*, 133 S.E. at 423.

[149] In both, neither actor alone could have brought the harm, nor was it clear that any of the actors was a "necessary" cause (it could be that the victim would have been harmed even absent one of the polluters in *Moses* and some of the polluters in *Tidal Oil*). *See supra* notes 45–48 and accompanying text.

[150] The numerical example discussed in Section III.C above with regard to *Tidal Oil* can apply with the same force to *Moses*.

[151] McMillan *ex rel.* McMillan v. Mahoney, 393 S.E.2d 298 (N.C. Ct. App. 1990).

alternative liability could help the victim establish her case against shooters who used air rifles in a residential area—acts for which the defendants in similar cases, such as *Regina v. Salmon*[152] and *United States v. Boyd*,[153] were held criminally liable.

Concerted action cases are perhaps more likely to give rise to both criminal and civil liability. Indeed, it is often noted that the historical origin of the concerted action theory is the criminal doctrine of aiding and abetting.[154] If that was ever the case, it is now time for the concerted action theory to break away from its roots. The two theories are fundamentally different. It is true that both tort law's concerted action and the criminal concept of aiding and abetting impose liability on a group of actors, including non-injuring parties.[155] But, this is also where the similarity between the civil doctrine and its criminal counterpart ends. What courts have missed is that by imposing liability on a large number of actors, tort law's concerted action theory could *dilute* the injurer's incentives to take care thereby encouraging the actors to behave tortiously. Criminal liability, on the other hand, does the opposite. Criminal liability deters the parties by employing an anti-dilution mechanism. When *A* and *B* engage in a criminal activity in concert, each is subject to the same penalty, as if she alone injured the victim. Importantly, criminal liability is not apportioned between the participants.[156] If drag racing is subject

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[152] *Regina v. Salmon*, 6 QBD 79 (Eng. 1880), is the criminal equivalent of *McMillan* and *Summers*. The three defendants fired from the same gun in a field bordered with roads and houses. Their shots were directed at a board posted on a tree. None of the defendants intended to harm anyone. But, one of them, although it was not clear who, hit and killed a boy in a nearby garden. All were convicted of manslaughter.

[153] United States v. Boyd, 475 F.3d 875, 877 (7th Cir. 2007) (holding that the defendant's act of firing multiple shots in "the downtown of a large city when pedestrians . . . are known to be in the vicinity a risk of harm, while not large in probabilistic terms, is substantial relative to the gratuitousness of the defendant's actions"). *Boyd* is discussed in *Boim v. Holy, Land Foundation for Belief and Development*, 549 F.3d 685, 692 (7th Cir. 2008). *See supra* notes 89–96 and accompanying text.

[154] *See supra* notes 77–81 and accompanying text.

[155] *See supra* notes 77–81 and accompanying text.

[156] *See, e.g.*, People v. Abbott, 445 N.Y.S.2d 344, 346 (1981) (affirming the conviction of negligent homicide of each of the drivers in a drag race although only one injured the victim); Com. v. Holstein, 927 A.2d 628, 633 (2007) ("[K]nowingly attend[ing] an illegal drag racing event as a conscious and voluntary spectator . . . [is] sufficient to sustain [a] conviction."); OHIO REV. CODE ANN. § 4511.251(A) (West 2016) ("Persons rendering assistance in any manner to such competitive [street racing] of vehicles shall be equally charged as the participants."). *But see* State v. Maravola, 198 N.E.2d 88, 88 (Ohio Ct. App.

to a penalty of ten years, each party may receive the same penalty whether two or five actors engaged in the race. In fact, in some cases (e.g., felony murder), as the number of criminals increases, the expected liability of each may increase as well.[157] The parties' civil liability, however, could be diluted as the number of tortfeasors increases. If drag racing comes with an expected liability of $90, each of two tortfeasors can expect a liability of $45, but with nine tortfeasors each can expect to be liable only for $10.

One may argue that in cases where the same behavior can give rise to both criminal and civil liability, the effect of concerted action theory is only compensatory. There is some truth to the argument. When it comes to activities that are at the core of the criminal justice system, criminal liability may provide the anti-dilution mechanism that is missing in tort law. Still, even with regard to crimes that would carry harsh penalties, it is important to understand the effect of the tort system on the parties' incentives. Since deterrence is achieved by the combined effect of the criminal and civil systems, the issue is not trivial. Those interested in a high level of deterrence would want to *increase* criminal fines and penalties or impose high enough punitive damages in cases where civil law corrodes the parties' liability.

Moreover, as an empirical matter, it is likely that in many cases, civil liability is not accompanied by criminal liability. Reasons vary. Some activities that would give rise to liability under concerted action theory would not give rise to criminal liability. Even if criminal liability could attach, it does not mean that it would. The prosecutors may refuse to initiate such proceedings because of budgetary, political, or other reasons. Victims may also refuse to press charges against some of the actors, as was the case in *Bierczynski*.[158] In that case, two drivers engaged in a race. One driver, Race, hit the victims' car and the other, Bierczynski, did not.[159] The victims sued and recovered from both drivers with the aid of concerted action theory. Yet, on the criminal front, they chose to press charges only against the injurer, Race, although under criminal law the acts of both drivers

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1963) (reversing the conviction of nine defendants who merely observed a drag race explaining that mere observance does not mount to "assistance").

[157] *See supra* note 84 and accompanying text.

[158] Bierczynski v. Rogers, 239 A.2d 218 (Del. 1968).

[159] *Id.* at 220.

gave rise to criminal liability.[160] The higher standard of proof required in criminal proceedings may also increase the number of behaviors that would be subject to civil but not criminal liability.

The contradictory impact of the criminal and civil systems is puzzling. Why does the legal system use the criminal system to deter actors from engaging in a certain behavior while at the same time allowing tort law to dilute the incentive of the same actors to take care? One possibility is that the dual system is purposefully (even if not consciously) designed to allow the law to keep up with changing moral norms. Such a dual system ensures that the development of tort law—the product of judge-made decisionmaking that is guided by efficiency principles—remains uninterrupted. If enough people would like to engage in a socially desirable activity, tort law allows them—in fact incentivizes them—to do so by diluting their liability. If the legislature does not want to respect the parties' private benefits, it can impose criminal liability and adjust fines and penalties upwards, thereby counteracting the effect of the tort system. Similarly, prosecutors may devote more resources to go after such actors. If over time the activity becomes less reprehensible or even acceptable, the legislature can remove the criminal liability or prosecutors may decide not to pursue charges. This explanation is consistent with the common law efficiency hypothesis.[161]

It may be appropriate to end this subsection with a cautionary note. Courts and policy makers should be aware of this unique institutional feature for at least three reasons. First, they should be careful in drawing analogies between the tort-based concerted action theory and the criminal doctrine of aiding and abetting, even when both are applied to identical situations (e.g., drag racing). At times, courts often ignore this point. In criminal cases

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[160] *Id.* at 222.

[161] Although criminal law codifies many common rule principles, it is nevertheless code-based and, as such, is the product of those who are subject to lobbying and a myriad of interests. *See* POSNER, *supra* note 11, at 297–98, 729–32 ("Judge made rules are more likely to be efficiency-promoting than those made by the legislature-made rules" because "the rules of adjudication make it difficult for interest groups even to be heard." In contrast, "[t]here is no rule against taking into account the deserts of the people affected by proposed legislation" in the legislative process). The criminal system, like punitive damages, may also increase efficiency by channeling transactions to the market when a market exists. *See* POSNER, *supra* note 11, at 240, 256 (explaining that some intentional torts and corresponding crimes "involve not a conflict between legitimate (productive) activities but a coerced transfer in a setting of low transaction costs"). *See also supra* note 25.

involving multiple parties, courts sometimes draw an analogy to tort cases applying group causation theories.[162] In tort cases they rely on criminal decisions, although the group causation theory that bears the same name leads to dramatically different results.[163] The result could be over or under dilution of the parties' liability and thus inefficient activity and precaution levels. Second, those policymakers, enforcers, and judges who would like to increase deterrence using the civil system should *reduce* the number of liable actors, impose punitive damages, or use other anti-dilution mechanisms. Finally, those who analyze the effect of the legal system should not be swayed by the rhetoric of judges and policymakers who may declare one goal, but legislate, enforce, or interpret rules in a way that achieves another.

### D. REEVALUATING CONCURRENT CAUSES' CAUSATION DOCTRINES

Thus far this Article has explained what the law *does*. It has revealed that group causation theories incentivize actors to forgo care and engage in dangerous activities that courts seem to condemn and other areas of the law prohibit, but that efficiency welcomes. It has also explained why but-for causation is, or should be presumed, present in cases where courts and scholars insist that it has long been abandoned. The theory proposed here, however, is not just descriptive. In fact, it has important implications for courts and policy makers. By focusing on concurrent causes situations as a case study, this Section seeks to highlight some of these doctrines and normative implications. It begins with a review of the substantial factor test and its alternatives, including its newly adopted replacement—the NESS (necessary element of a sufficient set) test. It then reveals that

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[162] *See, e.g.*, State v. McFadden, 320 N.W.2d 608, 611–13 (Iowa 1982) (holding that there is no reason to adopt a different causation standard under the criminal offense of involuntary manslaughter than that under tort law); Burrage v. United States, 134 S. Ct. 881, 889–90 (2014) (analogizing a criminal case where a drug user died after consuming multiple drugs, one of which was sold by the petitioner, to concurrent causes cases).

[163] *See, e.g.*, Agovino v. Kunze, 5 Cal. Rptr. 534, 538 (Cal. Ct. App. 1960) (citing People v. Kemp, 310 P.2d 680, 683 (Cal. Dist. Ct. App. (1957)) (relying on a criminal case where the non-injuring driver was held liable for manslaughter to hold a non-injuring driver in a drag race liable for the victim's injuries); Heick v. Bacon, 561 N.W.2d 45, 54 (Iowa 1997) ("This definition of criminal aiding and abetting is not substantially different from the definition of civil aiding and abetting."); Coopman v. State Farm Fire & Cas. Co., 508 N.W.2d 610, 613 (Wis. Ct. App. 1993) (agreeing that reliance on the criminal code "is a useful framework").

these theories are overbroad and may have even been mischaracterized. It also shows that attempts to determine whether a force is necessary, sufficient, overdetermined, or trivial may be illusory. Armed with these insights, this Section turns to illuminate some of the most controversial issues that have been subject to debate.

*1. Overdetermined Cases and Alternatives to the But-For Test.* One category of concurrent causes situations that has preoccupied courts and scholars for decades is that of "overdetermined-harm" cases. These are cases where the victim's harm, so it is argued, would have materialized regardless of the tortious behavior of any one defendant.[164] The classic example is a situation where two actors independently and tortiously set fires, each of which could alone destroy the victim's cabin.[165] As with concerted action cases, most courts and scholars have agreed that actual causation in such cases is missing.[166] They explain that the but-for test requires that the defendant's tortious conduct be a necessary condition for the harm[167] and that the test fails for exactly this reason: neither fire is necessary.[168]

To avoid a situation where both actors escape liability in such a situation, courts have replaced the but-for test with alternatives. The most widely used is the substantial factor test, famously

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[164] *See* Richard W. Wright, *Causation in Tort Law*, 73 CAL. L. REV. 1735, 1740 (1985) ("[O]verdetermined-causation cases . . . [are] cases in which two or more factors each would have been sufficient to produce the injury, so that none of them was a necessary condition for the injury."); *see also* DOBBS, *supra* note 121, § 168 at 410, § 171 at 414 (noting that a "special problem with multiple causes arises . . . when either of two causes standing alone would suffice to cause the plaintiff's injury"); RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 26 cmts. b, i, j (discussing causation theories when multiple causes may have been sufficient for a harm).

[165] *See* DOBBS, *supra* note 121, § 171, at 414 ("When each of two or more causes would be sufficient . . . a literal and simple version of the but-for test holds that neither . . . is a cause of the harm.").

[166] *Id.* at 415 ("Cases like the two fires cases have consequently put the simple but-for test in doubt and courts have in fact modified the test to deal with such cases"). *See supra* note 4 and accompanying text.

[167] *See supra* notes 100–04 and accompanying text.

[168] *See* PROSSER AND KEETON, *supra* note 10, § 41, at 266 (discussing the fire example and noting that the but-for test fails in these situations); DOBBS, *supra* note 121, § 171, at 714–15 (noting that "[t]he classic example is the case of two fires" one in which "[e]ither fire is sufficient to burn the property" so that either defendant could "claim that he is not a cause under the but-for rule").

popularized by the *Restatement (Second)*.[169] Others have suggested, and at least one court has adopted, collective causation tests.[170] Under these tests the court asks whether the combined conduct of all defendants, viewed as one unit, is a but-for cause of the injury.[171] If it is, the conclusion establishes but-for causation for each of the individual defendants in the group.[172] More recently, Wright has advocated for,[173] and the *Restatement (Third)* adopted,[174] a sufficiency test. To somewhat simplify, the test asks whether the defendant's behavior is a necessary link (or element) in a chain (set) of actual events that alone can cause the harm.[175]

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[169] RESTATEMENT (SECOND) OF TORTS § 432(2) (AM. LAW INST. 1965) (explaining that a tortious behavior that alone could cause the harm is considered a cause of the victim's harm so long as it was "a substantial factor in bringing [the harm] about"); RESTATEMENT (SECOND) § 433A(2) cmt. i ("Where two or more causes combine to produce such a single result, incapable of division on any logical or reasonable basis, and each is a substantial factor in bringing about the harm . . . each of the causes is charged with responsibility for the entire harm"); *see also* DOBBS, *supra* note 121, § 171, at 415 ("[The] test says that all defendants who are substantial factors in the harm are causes in fact."); PROSSER AND KEETON, *supra* note 10, § 41, at 267–68 (arguing that the substantial factor test is an improvement over the but-for test in these special cases). The substantial factor test applies also to situations where one fire was the result of the defendant's tortious act and the other was the result of a force of nature. DOBBS, *supra* note 121, § 171, at 415.

[170] *See* Spaur v. Owens-Corning Fiberglas Corp., 510 N.W.2d 854, 858 (Iowa 1994) (citing PROSSER AND KEETON, *supra* note 10, § 41, at 268) (adopting a collective causation test and noting that "the conduct of two or more persons" is the cause of an event if the conduct "is so related . . . that their combined conduct, viewed as a whole, is a but-for cause of the event"); DOBBS, *supra* note 121, § 171, at 417 (explaining that causation is established under a collective causation test if "the conduct of all defendants as a group is aggregated" and, when "taken as a unit or set," is the but-for cause of the harm). Some even argue that group causation theories, like alternative liability, can be viewed as such collective causation rules. *See* John Makdisi, *Proportional Liability: A Comprehensive Rule to Apportion Tort Damages Based on Probability*, 67 N.C. L. REV. 1063, 1086 (1989) (noting that in cases such as *Summers*, the courts impose liability "in each situation on independent tortfeasors as a group even though proof of causation for any one of the tortfeasors was not possible").

[171] PROSSER AND KEETON, *supra* note 10, § 41, at 268.

[172] *Id.*

[173] Wright, *supra* note 164, at 1793; Wright, *supra* note 9, at 1303.

[174] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 27 cmt. a, illus. 1 (AM. LAW INST. 2010) (discussing the fires hypothetical and finding both actors to be the cause of the victim's harm); *id.* § 26, reporters' note, cmt. j (noting that the "substantial-factor test has not . . . withstood the test of time, . . . has proved confusing, and [has] been misused"). The *Restatement (Third)* adopted the causal set model, which is consistent with Professor Wright's NESS test. For an explanation of the NESS theory, see *id.* § 26 cmt. c ("A useful model for understanding factual causation is to concede of a set made up of each of the necessary conditions for the plaintiff's harm.").

[175] Wright, *supra* note 164, at 1793.

If so, causation is established.[176] According to the NESS, in the merging fires example, there are two potential "chains," each consisting of one of the fires and the victim's house. Because each fire is a necessary link in a chain and each chain alone is sufficient for the occurrence of the harm, each fire is considered a cause of the harm. In other words, each fire is a necessary element of a sufficient set (NESS). The result does not change if two fires were necessary to cause the harm, but six fires merged and destroyed the victim's property. Here, each of the six fires is a NESS cause because each fire is a necessary element in a set that included one of the other five fires.[177]

The NESS test adopted by the *Restatement (Third)* is a clever "solution."[178] Its purpose is to provide an analytical framework in "overdetermined-causation cases that the [but-for] test fails to handle properly."[179] But, it may be a "solution" for a problem that does not always exist. This Article is the first to show that, what some may easily and mistakenly perceive as a situation of duplicative (or overdetermined) causes, could in fact be a situation that can be handled by the but-for test. To see this, reconsider Example 1D,[180] but assume that instead of hunters, the parties are factories. For convenience, the example is summarized below:

> **Example 6: Overdetermined Causes.** Two factories, $F1$ and $F2$, are located next to a \$90 lake. Production brings an expected benefit of \$50, but the process will completely destroy the lake. Each factory can avoid harming the lake if it installs a \$60 device.

Here, one factory alone would not produce (50<60, 90). On the other hand, if each factory can be sure that another will join the activity and be held liable, both will produce and neither will take care. In such a case, each will expect a profit of \$5 (50-90/2) and total welfare will increase by \$10 (50x2-90). Here, each factory is a

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[176] *Id.*

[177] *See id.* (explaining that, according to NESS theory in the duplicative force case, each fire is an actual cause because each "was necessary for the sufficiency of a set of actual antecedent conditions that included only one of the other fires").

[178] *See id.* at 1740–41 ("[The NESS test] resolve[s] the problematic causation cases that have resisted solution under all the alternative tests.").

[179] *Id.* at 1775.

[180] *See supra* p. 31.

but-for reason for the harm. *F*1 will not produce unless *F*2 joins the activity and acts carelessly. Similarly, *F*2 will not engage in the activity unless *F*1 produces without taking care. The point here is that what may seem to be an overdetermined case is a situation that can be analyzed under the traditional but-for test. Example 6 and many of the previous examples illustrate that the need for the NESS test may be overstated.[181]

In cases where there is more than one sufficient set, the NESS test adopted by the *Restatement (Third)* does not do away with causation or the but-for analysis.[182] Rather, it requires that each force is a necessary (or but-for) link in a chain of events that could alone cause the harm. However, the *Restatement (Third)*'s explanation that the new standard "comports with deep-seated intuitions about causation and fairness"[183] is less persuading. For the reason explained in Section IV.A above, the substantial factor and NESS tests can be effective dilution mechanisms. By increasing the number of liable actors, they may reduce their expected liability and consequently, their incentives to take care. The perhaps counter-intuitive result from applying such theories is an increase in the number of accidents. For members of the law and economics movement, this may be acceptable if the accidents are cost-justified. For others, stating that the NESS test "comports with deep-seated

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[181] But this does not necessarily diminish the NESS test's ability to deal with such situations. *See supra* note 177.

[182] DOBBS, *supra* note 121, § 189 (criticizing the substantial factor test as one that "avoid[s] causal analysis," is devoid of any reasoning and simply "invite[s] the jury's intuition"); *see also* Wright, *supra* note 164, at 1802–03 ("[W]hen there is no overdetermined-causation problem—that is, when there is only one actual or hypothetical sufficient set of conditions for a particular event—the NESS test collapses into the simple, traditional but-for test.").

[183] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 27 cmt. c; Paroline v. United States, 134 S. Ct. 1710, 1724 (2014) ("[I]t would be nonsensical to adopt a rule whereby individuals hurt by the combined wrongful acts of many (and thus in many instances hurt more badly than otherwise) would have no redress, whereas individuals hurt by the acts of one person alone would have a remedy."); *see also* DOBBS, *supra* note 121, § 171, at 415 ("The but-for test . . . leads to a result that is almost always condemned as violating both an intuitive sense of causation and good legal policy."); PROSSER AND KEETON, *supra* note 10, § 41, at 268 ("The substantial factor rule was developed primarily for cases in which the application of the but-for rule would allow each defendant to escape responsibility . . . ."); Malone, *supra* note 8, at 89 (noting that in such cases "[o]ur senses have told us that he *did* participate"); Robertson, *supra* note 78, at 1778 ("[O]ur intuition tells us [that in concurring causes cases] the but-for test, normally so reliable an analytical tool, suddenly turns unreliable.").

intuitions about causation and fairness" may seem like a stretch given that it may result in more accidents.

The second explanation adopted by the *Restatement (Third)* is even more problematic. The claim is that exempting both actors from liability would result in irony. It would make a victim that was harmed by two tortious actors worse off compared to a victim that was injured by one of them only.[184] The argument is that the irony is avoided by holding both parties liable. But, the "solution" creates another irony. The attempt to help the remediless victim may be the very reason for her injury (although the result in many cases can be justified on efficiency grounds).

*2. Insufficient and Unnecessary Causes.* One area where the *Restatement (Second)* and the *Restatement (Third)* sharply diverge is with regard to multiple insufficient and unnecessary causes. The stark contrast can be illustrated by a hypothetical that has already drawn much attention.[185]

> **Example 7: Multiple Insufficient and Unnecessary Causes.** *A*, *B*, and *C* independently, but simultaneously, lean on *P*'s car and as a result, the car rolls and falls over a cliff. The force exerted by each would have been insufficient to propel the car, but the combined forces of any two of them would have been sufficient.

Under Section 432(2) of the *Restatement (Second)*, only when each force is a *sufficient* cause could the substantial factor test apply.[186] Drawing on this section, Robertson explains that,

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[184] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 27 cmt. c ("When two tortious multiple sufficient causes exist, to deny liability would make the plaintiff worse off due to multiple tortfeasors than would have been the case if only one of the tortfeasors had existed."); *see also* Jane Stapleton, *Legal Cause: Cause-in-Fact and the Scope of Liability for Consequences*, 54 VAND. L. REV. 941, 967–68 (2001) (explaining that in cases like the two-fire hypothetical insisting on the but-for test "would result in the victim of two tortious acts being treated worse by the law than the victim of a single tortious act (i.e., if he had only been shot at and hit by one careless hunter)," and explaining that application of an alternative test is justified "on the basis that the legal concern with upholding the 'dignity of the law' outweighs concerns with deterrence, fairness to defendants, and so on").

[185] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 27, cmt. f, illus. 3 (AM. LAW INST. 2010).

[186] RESTATEMENT (SECOND) OF TORTS § 432(2) (AM. LAW INST. 1965) ("If two forces are actively operating, one because of the actor's negligence, the other not because of any

because in the car hypothetical the forces exerted by neither *A*, nor *B*, nor *C* alone are sufficient, they all should be exempted from liability for lack of actual causation.[187] On the other hand, the *Restatement (Third)* treats the hypothetical as an example of an overdetermined case.[188] The force exerted by each of *A*, *B*, and *C* is considered a NESS cause because each is a necessary element for the sufficiency of a causal set that includes one of the other actors.[189]

Neither view is correct. Both Robertson and the *Restatement (Third)* assume that the but-for test must fail in these cases, and for this reason, both are wrong. It is easy to show that in many cases like the car hypothetical there is simply no need for the substantial factor or NESS tests. The traditional but-for test can do the job. This can be illustrated if, for example, one assumes that the value of *P*'s car is $90 and that each of the actors is willing to pay $40 for the pleasure to lean for a few seconds on a

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misconduct on his part, *and each of itself is sufficient to bring about harm to another*, the actor's negligence may be found to be a substantial factor in bringing it about." (emphasis added)).

[187] David W. Robertson, *Causation in the* Restatement (Third) of Torts*: Three Arguable Mistakes*, 44 WAKE FOREST L. REV. 1007, 1022 (2009) [hereinafter Robertson, *Restatement (Third) Three Mistakes*]; *see also* Fischer, *supra* note 44, at 281 ("Courts and scholars frequently explain the [substantial factor] exception to the but-for test as applying when the competing forces are independently sufficient to cause the injury" and concluding that the test "becomes relevant *only* in the case of 'multiple sufficient causes,' " as in the case of two fires tortiously and independently set by different actors such that each alone could cause the harm (emphasis added)); Robertson, *supra* note 78, at 1776 ("In the narrowest and only fully legitimate usage, the term describes a cause-in-fact test that is useful as a substitute for the but-for test in a limited category of cases in which 'two causes concur to bring about an event, and either cause, operating alone, would have brought about the event absent the other cause . . . .' " (citing Magee v. Coats, 598 So. 2d 531, 536 (La. Ct. App. 1992) (citing Lejeune v. Allstate Ins. Co., 365 So. 2d 471, 476–77 (La. 1978)))). *But see* Warren v. Parkhurt, 92 N.Y.S. 725, 228 (N.Y. Sup. Ct. 1907) (holding liable each of twenty-six defendant-mills, none of which was necessary or sufficient for the actual harm); Tidal Oil Co. v. Pease, 5 P.2d 389, 391 (Okla. 1981) (holding liable each defendant for damages to plaintiff's livestock even though no one defendant's actions were necessary or sufficient for the actual harm); Fischer, *supra* note 44, at 286 (reviewing the case law and providing additional examples).

[188] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 27 cmt. f, illus. 3 (AM. LAW INST. 2010) (explaining that when "tortious conduct by one actor is insufficient . . . [a] multiple-sufficient-casual-set situation" is created when it is combined with the conduct of other actors because "the conduct overdetermines the harm" and accordingly concluding that, in the car example, the behavior of each actor can be considered a cause in fact).

[189] *Id.*; Robertson, *Restatement (Third) Three Mistakes*, *supra* note 187, at 1022; *see also supra* note 177 and accompanying text.

car that might fall (e.g., because they need the short rest or enjoy the thrill of possibly propelling the car). One actor will lean on the car because she will enjoy a benefit at no cost (it takes two to propel the car). Two actors will not lean because the expected liability of each, $45 (90/2), outweighs the expected benefit, $40. Three actors, however, would be interested in the activity provided they do so together for an expected net benefit of $10 (40-90/3). The parties may agree to lean simultaneously or, without having a verbal agreement, they can act in unison. Importantly, in such a case, each actor's behavior should be considered a but-for reason for *P*'s harm. *A* would not have caused the harm but for the fact that *B* and *C* joined her. The analysis is identical for *B* and *C*. The conclusion is that the forces exerted by each of *A*, *B*, and *C* are each a but-for cause of the harm.

*3. Trivial Contributions.* But, what if more actors joined *A*, *B*, and *C* such that the force exerted by each of them was trivial? Should an actor whose tortious behavior contributed 1% of the harm be liable for the entire harm? The answer seems to be "no" under both Restatements. The *Restatement (Second)* does not take an official position, but it notes that it would "perhaps be unjust" to hold liable an actor whose contribution was a "relatively small and insignificant part to the total harm."[190] Section 36 of the *Restatement (Third)* does not leave room for doubt. "When an actor's negligent conduct constitutes only a trivial contribution to a causal set that is a factual cause of harm under Section 27, the harm is not within the scope of the actor's liability."[191]

Against this consensus, the theory pressed in this Article shows that, in some cases, but for the actor whose contribution to the harm was trivial, the entire harm would not have happened. To see why contrast Example 7 (the car hypothetical)[192] with Robertson's version of that example.[193] In Robertson's example, eight actors, *A–H*, leaned on the car.[194] The forces exerted by each of *A–G* constituted thirty-three percent of the force necessary to

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[190] RESTATEMENT (SECOND) OF TORTS § 433B cmt. e (AM. LAW INST. 1965); *see also id.* § 433 (explaining that whether the substantial factor test should apply depends, among other things, on "the number of other factors which contribute in producing the harm and the extent of the effect which they have in producing it").

[191] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL AND EMOTIONAL HARM § 36.

[192] *See supra* p. 52.

[193] Robertson, *Restatement (Third) Three Mistakes*, *supra* note 187, at 1022.

[194] *Id.*

roll the car (that is, the combined forces of any three actors can cause the harm).[195] The force exerted by the eighth actor, *H*, constituted only one percent of the necessary force.[196] Robertson argues that *H* should and would be exempted for lack of actual causation:

> Under *Restatement (Second)* section 432(2), it is very plain that [*H*]'s force was neither sufficient to bring about the harm nor a substantial contribution to bringing it about; *clearly [H] should be exonerated on factual-causation grounds.* *Restatement (Third)* section 27 says that [*H*]'s conduct was a factual cause of the harm. Thus section 27 is overinclusive. The Reporters concede this, which in turn requires the creation of *Restatement (Third)* section 36, so as to exonerate [*H*] on scope-of-liability (proximate-cause) grounds.[197]

The Restatements and Robertson focus on the contribution of (or force exerted by) each actor—whether it is 1%, 33% or 100%. But, they miss the point. It could be that but for the actor whose behavior contributed trivially to the harm, no one would have behaved tortiously and the harm would not have occurred at all. This is the lesson of Example 7,[198] where the contribution of each was not even a consideration in concluding that each actor who leaned on the car was a but-for reason of the harm. To illustrate this point further consider the following example:

> **Example 8: Trivial Contribution.** A $90 lake will be destroyed if 100 units of pollution are released. Four factories, *F*1–*F*4, each released 500,000 units of pollution into the lake. The fifth factory, *F*5 released only 100 units. Taking care is impossible or too costly.

If each factory values the polluting activity at $20, the four factories, *F*1–*F*4, will not operate. If they do, they can only expect

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[195] *Id.*
[196] *Id.*
[197] *Id.* at 1022–23 (emphasis added) (footnote omitted).
[198] *See supra* p. 52.

a loss (20-90/4<0). But if *F5* joins them and is also held liable (e.g., under strict liability), the five actors would be better off operating and polluting. With a diluted expected liability of $18 (90/5), each can expect a gain (20-18). The point here is that, but for the trivial contribution (less than 1%) of *F5*, the harm would not have happened. Importantly, the amount of pollution released by each of the actors is of no consequence. Whether it was 500,000, 100, or 1 unit(s) of pollution, each of the five actors is a but-for cause, *equally* responsible for the harm. Accordingly, the fact that *F5*'s contribution was a "relatively small and insignificant part to the total harm"[199] should not, without more, exempt her from liability.[200]

A similar mistake is made by Fischer.[201] Fischer provides an example involving two polluting agents, *X* and *Y*, that is reminiscent of the facts in *Tidal Oil*, *Warren*, and Example 8 above.[202] *X* discharges twenty-five units of pollution. At the same time, *Y* discharges one unit. A minimum of fifteen units is enough to kill a cow. *P*'s cow drinks the contaminated water and dies.[203] Like Robertson, Fischer concludes that "*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."[204] However, as Examples 7 and 8 demonstrate, whether *Y* is a cause should not be narrowly decided based on the number of pollution-units it discharged.[205] It could well be the case that, but for *Y*'s action, *X* would not have engaged in the activity to begin with.[206]

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[199] *See supra* note 190 and accompanying text.

[200] The same can also be illustrated using Robertson's example. If each of *A–G* values lying on the ground at $27.50, they will not lean on the car (40-90/7<27.50) unless joined by *H* (40-90/8>27.50). Importantly, the amount of force exerted by each of the actors is of no consequence. Whether it was 99% of the force or merely 1% of the force needed to push the car, each of the eight actors is a but-for cause. Robertson, *Restatement (Third) Three Mistakes*, *supra* note 187, at 1022.

[201] Fischer, *supra* note 44, at 289 (suggesting that "[b]ecause [cases involving insufficient causes] 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").

[202] *Id.* at 278–79.

[203] *Id.* at 278.

[204] *Id.* at 281.

[205] *See* discussion *supra* Sections IV.D.*2*, IV.D.*3*.

[206] This assumes that the parties believed that liability would attach to all and thus be diluted.

## V. THE ASSUMPTIONS AND LIMITATIONS

A major goal of this Article is to describe what the law does. The argument is that the deterrent effect of doctrines like concerted action, substantial factor, and alternative liability has been overly exaggerated; that these doctrines can dilute the actors' incentives to take care and encourage them to engage in activities courts denounce as immoral and antisocial; that, notwithstanding statements to the contrary, courts respect the pleasure actors get from engaging in condemned activities; and that courts and scholars were too quick to conclude that the but-for test is wholly inapplicable in these cases.

Still, the theory pressed here is modest in scope. To begin with, this Article does not claim that dilution of liability is always welfare-enhancing[207] or that it always encourages "wrongdoing." As many of the examples discussed in this Article demonstrate, there could be many cases where liability will not be diluted enough to encourage actors to act tortiously. Indeed, Example 1—the very example that opened this Article—illustrates that, in some cases, group causation liability can deter actors (although as the number of actors increases, the liability imposed on each would lose its deterrent effect).[208] There we saw that a driver who benefits $40 from speeding would find it in her best interest to invest $35 in precaution to avoid an expected harm of $90.[209] Two drivers would also be deterred. By imposing liability on the injuring and non-injuring drivers, concerted action would dilute the expected liability of each to $45 (90/2), but the incentive to take care would remain strong (35<45). However, if concerted action held three actors liable, none would want to take care (35>90/3). Moreover, this Article does not argue that every case in which the three paradigmatic cases apply is congruent with the but-for test, or that the model discussed here is always applicable.

A major limitation of the model is its reliance on the parties' ability to engage in an ex ante cost-benefit calculation. In the drag race hypothetical discussed in Example 1, the participants must be able to estimate their expected liability.[210] Each should be able to

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[207] It is not. *See* Dillbary, *supra* note 24, at 995; *supra* note 25.

[208] *See supra* notes 15–21 and accompanying text.

[209] *See supra* pp. 5–6.

[210] *See supra* notes 15–21 and accompanying text.

assess that if she acts alone, she will be subject to an expected liability of $90, with another she will be subject to $45 (90/2), and as part of a group of three she will be subject to $30 (90/3). To do this, each party must be able to assess the benefits and costs of the activity, understand that in case of an injury each of the participants will be held liable, and be able to assess whether enough participants would engage in the activity so that she can expect a profit.[211]

These assumptions are realistic and likely to be present in many cases. To begin with, each actor should be able to assess how much she is willing to pay or accept to engage in a certain activity—that is, to assess the expected benefits. The determination is not unique to tortfeasors. When one pays for a hunting license, a ticket to participate in a game of paintball, or to sit in a front row on a racetrack, she must value the activity (at least ex ante) more than the amount she paid. So too is the case with the professional driver who is enticed to participate in a race for a certain salary or a promised prize; or the factory that decides to erect a new production facility. Calculating the expected cost requires a determination of the severity and probability of the harm and, for this reason, may seem more complicated. But, proxies are available. For example, in some cases, the actors can simply estimate the *maximum* expected liability and use it as a benchmark.[212]

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[211] *But see* Richard W. Wright, *Actual Causation vs. Probabilistic Linkage: The Bane of Economic Analysis*, 14 J. LEGAL STUD. 435, 437, 439 (1985) (criticizing the economists' ex ante approach and concluding that the actual causation requirement is "backward-looking" and "incompatible" with welfare-maximization theory).

[212] For example, polluters like those in *Tidal Oil* can easily determine the value of the victim's property simply by visiting websites like Zillow.com. Similarly, the drag race participants can assume that an accident may occur with certainty and they may be able to estimate the damage to neighboring cars and pedestrians based on characteristics of the neighborhood. *See* RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY 80 (2008) ("It is well established that the willingness to pay to avoid risk is highly correlated with income."); Ariel Porat, *Misalignments in Tort Law*, 121 YALE L.J. 82, 86–87 (2011) (explaining that because "in the rich neighborhood most people have a higher income than the residents of the poor neighborhood" and because tort law awards more damages to high-income victims, a driver will likely take "more care in the rich neighborhood than in the poor one"); W. Kip Viscusi, *The Value of Life in Legal Contexts: Survey and Critique*, 2 AM. L. & ECON. REV. 195, 212–13 (2000) ("[B]ased on the usual benefit measures the value of life for more affluent populations should be greater."). Estimating the expected value of human life is not an exception. *See, e.g.*, Frank Cross & Charles Silver, *In Texas, Life Is Cheap*, 59 VAND. L. REV. 1875, 1891 (2006) (examining jury awards and finding that compensation for the value of life ranged between approximately $2–$4 million).

The second assumption—knowledge that all the participants would be subject to liability—is also not a major obstacle. Actors are likely aware that they could all physically injure the victim, and if so, that they would all be held liable together (e.g., multiple agents may be aware that their facilities would contaminate the same reservoir). Moreover, the fact that almost every court and the majority of scholars have relied on basic concepts of justice, fairness, and morality to justify group causation theories also implies that group liability should be expected.[213]

The assumption that each actor can assess that some minimum number of participants will engage in the activity is also reasonable in many group causation cases. This is especially the case in concerted action situations. In these cases, most courts require an actual agreement between the parties.[214] Each party to the agreement must thus be aware, at the very least, of the number of parties with whom it contracted. In the drag race examples, each participant would know or estimate the number of participating drivers and the spectators who encouraged them. The few courts that do not insist on an actual agreement require that those "acting independently, know, or have reasonable ground to believe, that their independent acts, combining with the independent acts of others, will . . . caus[e] damage," and that "all [participants] have knowledge of the independent acts that create the result and continue the independent acts with knowledge."[215] It is this knowledge, the *Moses* court held, which *"ipso facto creates a concert of action"* that subjects them to group liability.[216]

The Substitution Hypothesis implies that the assumption that the parties are able to determine or estimate the number of participants will likely hold in many concurrent and alternative

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[213] *See supra* note 8–12 and accompanying text.

[214] *See* PROSSER AND KEETON, *supra* note 10, § 46, at 323.

[215] Moses v. Town of Morganton, 133 S.E. 421, 423 (N.C. 1926).

[216] *Id.* (emphasis added). *See also* Warren v. Parkhurt, 92 N.Y.S. 725, 727 (N.Y. Sup. Ct. 1904) ("[W]hile each defendant acts separately, he is acting at the same time in the same manner as the other defendants, knowing that the contributions by himself and the others acting in the same way will result necessarily in the destruction of the plaintiff's property. If necessary, in order to get at them, a court . . . may infer a unity of action, design, and understanding, and that each defendant is deliberately acting with the others in causing the destruction of the plaintiff's property."). On the classification of this case, compare PROSSER AND KEETON, *supra* note 10, § 46, at 323 (viewing *Moses* as a concerted action cases) with *supra* note 141 and accompanying text (characterizing Moses as a concurrent causes case).

liability situations.[217] In *Tidal Oil*, a concurrent causes case, the court explained that "to make tort-feasors liable jointly there must be some sort of community in the wrong-doing, and the injury must be in some way due to their joint work, but it is not necessary that they be acting together or in concert if their concurring negligence occasions the injury."[218] Thus if *D*1 and *D*2 polluted a stream which they, and *D*3 who built a dam, knew would harm the property of the victim, all are jointly liable under the substantial factor doctrine. The assumption also holds in many alternative liability cases. In both *Summers* and *Oliver* the defendants were parties to a hunting group and were well aware of the number of participants.[219]

Still, there may be cases in which the parties could *not* engage in ex ante calculations. A case where fires set by two tortious campers who are not aware of each other is such an example. In such cases, because the existence of another force is unpredictable and improbable, the actor cannot expect that others would shoulder her liability. Still, the model works well even in such cases. It is true that a group causation theory like substantial factor will dilute the parties' liability at the end of the day. If both are held liable and are solvent, each will be responsible for a fraction of the harm. But ex-ante, *when* the parties decide whether to engage in the activity, they cannot count on the happenstance of another force. Even if they are aware of another force, they may not know whether it originated due to the tortious conduct of another. As a result, the fact that such actor's liability would be diluted in trial due to a force of which she could not know does not enter her *ex-ante* considerations. In such cases the parties' diluted liability is unlikely to erode the deterrent effect.[220]

The model thus does not require that "courts have perfect knowledge about each accident (including the ex ante expected losses)" or that injurers, or the courts, be "omniscient" or "know[ ] . . . the magnitude and probability of all losses that may

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[217] *See supra* Section IV.B.

[218] Tidal Oil Co. v. Pease, 5 P.2d 389, 391 (Okla. 1981); *see also* Northup v. Eakes, 178 P. 266, 268 (Okla. 1918) (relying on *Tidal Oil*'s reasoning).

[219] Summers v. Tice, 199 P.2d 1, 2 (Cal. 1948); Oliver v. Miles, 110 So. 666, 667 (Miss. 1926).

[220] For an in depth analysis of such cases see Dillbary, *supra* note 141.

occur."[221] Nor does it assume that "each tortfeasor can . . . calculate . . . what conduct is efficient for every other tortfeasor that might contribute to the risk."[222] Rather, the model acknowledges that parties have limited knowledge, that ex ante calculations are not always feasible, and that courts have limited ability. In fact, it is the recognition of these limitations that explains why the decision whether to act (and bear the possible consequences of such acts) is deferred to market actors—the potential wrongdoers.

The model comes with other benefits. In addition to shedding a new light on what the law currently does, the model suggests changes that would facilitate the adjudication process and, unlike current doctrines and proposals, it does not require courts to do the impossible. To illustrate, recall the car hypothetical involving a group of actors leaning on a car (Example 7).[223] Jurisdictions that follow the *Restatement (Second)* must determine whether the actions of each are sufficient. Only if they are does the substantial factor doctrine apply.[224] Courts must also determine whether the contribution of each actor to the total harm was trivial. An actor whose contribution was trivial will be exempted from liability if the jurisdiction follows the *Restatement (Third)* and may be exempted if the *Restatement (Second)* applies.[225] Yet, in many cases, the determination of whether a force was sufficient or trivial is simply impossible. Indeed, the car hypothetical provided by the *Restatement (Third)* and discussed by Robertson illustrates the absurdity of providing the courts with such tasks. Can the non-omniscient court really determine the degree of force exerted by each actor? What if some simply leaned on the car while others also pushed it with their legs? Would the court be able to determine whether each force was sufficient, necessary, or trivial? Could the plaintiff (or anyone) provide evidence that would shed

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[221] Wright, *supra* note 211, at 445 (criticizing Shavell's model of causation); *see also* Feess & Hege, *supra* note 44, at 422–23 (explaining that "[t]here is a substantial body of literature showing that multiple causation does not constitute a serious obstacle to efficiency as long as the court is fully informed about the circumstances of an accident" and noting that "[b]y contrast, only very few contributions have examined problems of asymmetric information" (emphasis omitted)).

[222] Glen O. Robinson, *Multiple Causation in Tort Law: Reflections on the* DES *Cases*, 68 VA. L. REV. 713, 745 (1982) (criticizing Landes and Posner's causation model).

[223] *See supra* p. 52.

[224] *See supra* notes 186–87 and accompanying text.

[225] *See supra* notes 190–91 and accompanying text.

light on these issues? In the hypothetical world of the Restatements, one can determine whether a force is sufficient or trivial. One can also tell that the force exerted by *A* constituted 99% of the force necessary to roll the car and *B* only exerted 1%; or that *A–D* exerted 25% of the force necessary (so they could together propel the car) and *E* only exerted 5%. In real life, such determinations are likely to be impossible. Moreover, even if causation is established, the court will need to apportion liability. The apportionment task—whether based on fault, relative riskiness, or any other factor—seems illusory.[226]

The model makes such illusory determinations unnecessary. By defining the pool of injurers and assuming that each is a but-for cause of the harm, it relays the impossible task to defendants. The costly apportionment regimes are substituted with a cheaply administered pro-ration rule. Finally, the model is not only consistent with traditional doctrine, but it should also appeal to the moralist as it requires the injurers to internalize the cost they imposed on third party-victims in cases where the Restatements should, but fail, to do so.

The examples used in this Article may raise other concerns, namely that the examples are stylized, ignore the possible interdependency between the parties' actions, and assume that the expected harm to the victim is constant. This is a strong assumption. First, the severity of the harm, $H$, may increase with the number of actors. Even if the severity of the harm is not influenced by the number of tortfeasors, the probability, $p$, that an accident will occur may increase as more actors join the activity. For example, the expected harm, $pH$, from a drag race may be \$90 in the case of two actors. Yet, as more drivers join the party, the probability that a third party will be hurt may increase from $p$ to $p_1$ ($p_1 > p$) and if so, the *expected liability* would increase as well (to $p_1H > 90$). A more nuanced analysis is not only invited, but it may also provide additional insights. But, the main argument remains.

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[226] Rizzo and Arnold, for example, provide a theory of causation that requires knowledge of "relative riskiness of the causal agents." Mario J. Rizzo & Frank S. Arnold, *Causal Apportionment in the Law of Torts: An Economic Theory*, 80 COLUM. L. REV. 1399, 1426 (1980) (emphasis omitted). To illustrate their point, the authors discuss a situation in which two tortfeasors simultaneously shoot, hit, and kill a victim. Under their proposed theory, where one of the tortfeasors caused an injury that resulted in a 90% probability of the victim's death while the other caused an injury resulting in a 45% probability of death, the former must pay twice as much as the latter. *Id.* at 1410.

In some cases, the expected liability faced by each actor can be so diluted that the careless (and much condemned) activity will become socially desirable. This can happen, for example, because the *maximum* expected damage is capped and can be estimated.[227] In such a case the parties do not need to know what the probability of an accident is if two actors engage in the activity. Nor do they need to know whether and to what extent it would increase if more actors partake in the activity. Indeed, even if the actors assume that the accident (for example, pollution of a lake) is certain to happen ($p$=1), they may be able to estimate the maximum expected harm (for example, the value of the lake). And, with enough actors, this maximum expected harm will become so diluted as to make the activity worthwhile for each.

Moreover, the Article's claim is *not* that in every case each of the injuring and non-injuring actors is a but-for cause of the harm. Rather, it focuses on a narrow set of cases and it concedes, even demonstrates, that in *some* cases the injurer alone is the cause of the harm.[228] Yet, the Article shows that in many cases non-injuring actors are also but-for reasons for the harm. And, it argues that in other cases, for policy reasons, each actor should be treated as if she is a but-for reason for the harm.

## VI. THE ONE-PARTY-PAYS-ALL RULE

Group causation theories—theories that hold injuring and non-injuring participants liable—may be efficient. But are they necessary? Could the same result be achieved by other means? Thus far, following courts and scholars, this Article considered one alternative to group causation theories: no liability. The choice was between two options: (a) holding everyone liable (*all* the drivers in a drag race, *all* the factories whose pollutants combined, and *all* the hunters who shot carelessly); or (b) allowing these actors to escape liability and leaving the victim remediless. One important alternative that has been neglected by the prior literature is a regime under which *one* party is solely liable for the entire harm. In some cases the choice can be easy. In cases like *Bierczynski* the law could hold liable the sole injuring driver—the

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[227] Another example is when the accrued benefits outpace the increase in expected harm. *See supra* notes 110, 212 and accompanying text.

[228] *See supra* notes 114–17 and accompanying text.

one who crashed into the victim. In other cases, where multiple actors injured the victim or in cases where it is impossible or too costly to identify the injurer, courts could devise mechanisms to choose the unlucky actor who would alone bear the entire burden. For example, liability could be imposed randomly on *one* of the drivers in *Bierczynski*, on *one* of the polluters in *Tidal Oil*, or on *one* of the careless hunters in *Summers*.

Is the one-party-pays-all rule as efficient as a group causation theory? One could argue that it is. After all, the expected benefits and costs under group causation theories and the one-party-pays-all rule seem the same. To see this, consider again the drag race in Example 1. There, each of the three drivers expects a benefit of $40 and must spend $35 to avoid an expected damage of $90. Under concerted action theory, all drivers—the injuring and non-injuring ones—will be held liable. Accordingly, if all act carelessly, each will expect to shoulder 1/3 of the $90 damage, or $30, and thus expect a gain of $10 (40-30). Consequently, forgoing care would make all better off (10>40-35). Under the one-party-pays-all regime, the parties would face the *same* expected cost and benefits. At the start of the race, each driver knows that if she drives carelessly, the probability that she will be the one to hit the victim (and thus be held liable for the entire harm of $90) is 1/3.[229] She can thus expect to pay $30 (1/3x90) and gain $10 (40-30).

In the example above, the application of a group causation theory like concerted action and the one-party-pays-all rule lead to the same result. The reason is that, to incentivize each participant to drive carelessly, it is not necessary to hold all drivers liable for the entire harm. Rather, it is enough that every driver is at risk of being liable. Still, there are good reasons to prefer a group causation theory over the one-party-pays-all rule (beyond the public upheaval that the latter rule may generate):

*1. Holding Constant Ex Ante Expectations.* Group causation theories enjoy an important advantage over the one-party-pays-all regime: they ensure that the expected cost of the accident remains diluted throughout the activity. Consider again the drag race example with three drivers. At every point of the race, each driver should expect to pay one third of the damage or she will withdraw. Concerted action theory ensures the drivers that the expected

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[229] Assuming, for simplicity, that only one driver can be the injurer.

liability will indeed remain diluted. A driver who wishes to quit the race will remain liable unless she communicates her decision in a way that leaves the other participants enough time to reconsider their actions. This is the teaching of cases like *Lemons v. Kelly*.[230] In *Lemons*, two cars, one driven by Kelly and the other by King, engaged in a drag race.[231] The two cars were driving next to each other when at one point, just before the highway entered a series of curves, Kelly overtook King.[232] Kelly later lost control and as a result his passenger, Lemons, was injured.[233] At trial, Kelly and King argued that the race had ended about a mile before the accident occurred when Kelly passed King—an argument the victim seems to have admitted.[234] Despite the victim's admission, the court sustained the verdict for the plaintiff. "[O]ne who participates in setting hazardous conduct [like a drag race] in motion cannot later be heard to say: 'Oh! I withdrew before harm resulted even though no one else was aware of my withdrawal.' "[235]

In contrast, under the one-party-pays-all regime, the drivers cannot be confident that their liability will remain diluted. At the beginning of the race, each driver may believe that she has a 1/3 chance at bringing about the $90 harm, but the assessment may quickly change. For example, if one driver loses sight of the others, that driver may not be able to tell whether the other drivers remained in the race. The other drivers may have similar concerns regarding the missing driver. As a result, all drivers may adjust their expectations and alter their behavior accordingly.

*2. Dilution of Liability and Non-Injuring Parties.* The one-party-pays-all regime could also lead to inefficient results. The reason is that the one-party-pays-all rule is an inferior dilution mechanism. By definition, it does not impose liability on actors who cannot potentially injure the victim. The result could be over-deterrence. To illustrate, consider again the drag race with two drivers and one spectator discussed above. Under the one-party-pays-all rule, because there are only two potential injurers (the two drivers) each driver can expect to pay $45 (90/2) and, accordingly, each would take care (40-35>0>40-90/2). In contrast,

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230 397 P.2d 784 (Or. 1964).
231 *Id.* at 785.
232 *Id.*
233 *Id.*
234 *Id* at 785–86.
235 *Id.* at 787.

if the parties are subject to a group causation theory like concerted action, neither will take care, which is the efficient result. Concerted action is a more effective dilution mechanism because it imposes liability on the drivers and the spectator. As a result, each of the two drivers can now expect liability to be split three ways, thereby making driving carelessly worthwhile (40-90/3>40-35).

*3. Eliminating the Bad Driver.* The one-party-pays-all rule may be less effective when actors are not identical. Consider the three drivers who would like to race, but assume now that one of them is a worse driver than the others in the sense that she is more likely to injure the victim. A version of the one-party-pays-all rule that holds liable only the driver who physically injured the victim may initially look attractive. This version of the rule could cause the bad driver, who on average can expect to pay more compared to her fellow drivers, to either forgo the activity or take more care. The result may seem fair, but it would be inefficient because, but for the careless behavior of the bad driver, the socially beneficial race may not take place.[236] In contrast, under a group causation regime, tort law supplies a mechanism under which the better drivers subsidize the bad driver (by sharing the cost of the injury inflicted by that driver). But they do so gladly, since but for the careless participation of the bad driver, they would not enter the race they (and society) value.

*4. Deviation from Traditional Tort Law.* The one-party-pays-all rule would constitute a deviation from traditional tort law principles without countervailing benefits. The reason is that each actor—those who injured the victim and those who did not—is (or should be deemed) a but-for reason for the victim's harm. And once this becomes clear, there is simply no reason to exculpate the non-injuring actors or choose randomly one actor to bear the entire cost for which others are equally responsible. If each had a duty that she breached, and each was a cause (actual and proximate) of the harm, each actor should be held liable. Viewed this way, the one-party-pays-all regime exempts from liability actors who committed a tort, and for this reason, represents an undue deviation from traditional tort law.

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[236] This assumes that the parties cannot contract around the rule at low cost.

*5. Social Insurance.* An important assumption that underlies the application of the one-party-pays-all rule is that all parties are risk-neutral. The assumption is valid if a functioning market for insurance exists. But in the three paradigmatic cases discussed, the actors may not be able to purchase liability insurance. One reason is that they may be considered parties to intentional torts and may even be subject to punitive damages. Certain jurisdictions deny insurance coverage for torts committed intentionally,[237] and as a matter of contract, liability insurance generally excludes coverage for intentional torts.[238] Others jurisdictions may find invalid a policy to insure what they believe to be an immoral activity or criminal conduct.[239] Absent access to insurance markets, actors may behave as risk-averse and, as a result, decline to engage in harmful yet socially beneficial activities. In contrast, a group causation theory provides the

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[237] For a list of states prohibiting insurance coverage for punitive damages see Christopher Yetka, *Insurance Coverage for Punitive Damages*, 44 Tort Trial & Ins. Practice 19, 25 (2014). For decisions denying coverage of torts committed intentionally on public policy grounds, see Commercial Travelers Mut. Accident Ass'n v. Witte, 406 S.W.2d 145, 149 (Ky. Ct. App. 1966) ("[T]he policy of law forbid[s] one who had intentionally killed another to collect the insurance on his life . . . ."); Hussar v. Girard Life Ins. Co. of Am., 252 So. 2d 374, 374 (Fla. Dist. Ct. App. 1971) (explaining that public policy does not permit recovery for "intentionally and voluntarily self-inflicted injuries"); U.S. Concrete Pipe Co. v. Bould, 437 So. 2d 1061, 1064 (Fla. 1983) ("The Florida policy of allowing punitive damages to punish and deter those guilty of aggravated misconduct would be frustrated if such damages were covered by liability insurance."); Bohrer v. Church Mut. Ins. Co., 965 P.2d 1258, 1262 (Colo. 1998) ("[I]t is contrary to public policy to insure against liability arising directly against the insured from intentional or willful wrongs, including the results and penalties of the insured's own criminal acts." (internal quotations omitted)). *But see* Christopher C. French, *Debunking the Myth That Insurance Coverage Is Not Available or Allowed for Intentional Torts or Damages*, 8 HASTINGS BUS. L.J. 65, 101 (2012) (arguing that in some cases insurance coverage may be available for certain intentional torts).

[238] *See, e.g.*, Yetka, *supra* note 237, at 22 ("[S]tandard liability policies generally are written to exclude 'bodily injury' or 'property damage' expected or intended from the standpoint of the insured." (citing ISO Commercial Gen. Liab. Coverage Form CG 00 01 12 07, § I.A.2.a)).

[239] *See, e.g.*, Everglades Marina, Inc. v. Am. E. Dev. Corp., 374 So. 2d 517, 519 (Fla. 1979) ("[P]ublic policy precludes recovery under an insurance policy when the insured has committed a criminal act with known and necessary consequences."); Perreault v. Maine Bonding & Cas. Co., 568 A.2d 1100, 1102 (Me. 1990) ("[T]he general rule [is] that insurance to indemnify an insured against his or her own violation of criminal statutes is against public policy and, therefore, void." (quoting Altera v. United Fire & Cas. Co., 422 N.W.2d 485, 490 (Iowa 1988))); Goldsmith v. Green, 47 So. 3d 637, 641 (La. Ct. App. 2010) ("[N]o reasonable policy holder would expect for his own intentional criminal acts to be insured. . . ."); *see also supra* note 237 and accompanying text.

injurers with a social insurance. In all but one jurisdiction,[240] the tortfeasors are either subject to several liability or joint and several liability with a right of contribution. Each of *n* participants thus knows that, even if she physically injures the victim, she can expect to pay only a fraction, 1/*n*, of the harm (assuming solvency).

Ironically, group causation theories not only give priority to the interests of the tortious actors over the victim's interest in her body and property, they also provide social insurance for the very risky activities they purport to condemn. Moreover, the victim, being a member of that society, subsidizes the tortfeasors' actions. The conclusion is that the moralist, who prefers to reduce the number of accidents, should prefer the one-party-pays-all rule (e.g., the injurer-pays-all version). In contrast, group causation theories provide injurers with a stronger dilution mechanism and an insurance feature, and accordingly, lead to more accidents.

## VII. CONCLUSION

Courts have developed different theories to hold defendants liable even when the injury was clearly inflicted, or could have been inflicted, by others. They easily—too easily—admit that they relax or abandon the actual causation requirement, but they explain that they do so on two major policy grounds. The first is fairness to the victim, who was injured by a group of tortious actors and would remain remediless if the courts applied the traditional but-for test. The second is deterring actors from engaging in activities the law deems antisocial, often declares illegal, and even subjects to criminal liability.

The Article challenges these arguments. It is the first to offer a unified and consistent theory to all three major group causation paradigms: concerted action, concurrent causes, and alternative liability. The theory reveals that group causation theories are not designed to deter. Rather, imposing liability en masse may decrease the parties' incentives to take care and encourage them to engage in harmful activities—a result that some would consider unjust. Moreover, this Article uncovers that, despite the courts'

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[240] Alabama is the only jurisdiction that has retained the common law's no contribution rule. Susan Randall, *Only in Alabama: A Modest Tort Agenda*, 60 ALA. L. REV. 977, 980 (2009); Dillbary, *supra* note 17, at 1732.

rhetoric, group causation theories do so by giving weight to the subjective values that tortious actors place on harmful and dangerous activities. The theory pressed here, however, argues that the result can be justified on efficiency grounds, and it explains why, and under what conditions, these lamented activities are socially desirable and encouraged.

The Article also shows that the determination as to whether forces are sufficient, necessary, or trivial could be illusory. Another important insight is that imposing ("too much") liability on actors who did not physically injure the victim and imposing ("too little") liability on the injurer, can increase total welfare. What courts and scholars missed is that a non-injuring tortious party (or each of the injurers in what is referred to as an "overdetermined" case) can be an actual cause of the victim's injury, and should thus be equally responsible with the injuring parties for the entire harm. This Article is thus the first to reveal that courts, scholars, and the Restators have all been too quick to concede that the but-for test is inapplicable in the three paradigmatic cases. Accordingly, this Article suggests a more prominent role for the but-for test in causation analysis.