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Jane Stapleton

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Choosing what we mean by “Causation” in the Law

*Jane Stapleton**

In a radical new account of “causation” in the Law, I argue that “causation” is a term we use to express diverse information about the world. Clarity is promoted if we use the term “causation” to refer to the information yielded by only one type of inquiry. Lawyers have used the term to refer to more than one type of enquiry, and philosophers often do not specify an inquiry. The most useful inquiry for legal purposes is one that compares the actual world of a particular phenomenon with a hypothetical world and thereby determines, in the context of that comparison, the role that a specified factor played, if any, in the existence of the actual phenomenon. It is convenient to separate three forms of such a role of “involvement”: necessity, duplicate necessity and contribution, though contribution subsumes the others. We use our knowledge of the physical laws of nature, evidence of behaviour and so on to distinguish involved factors from factors that are merely “associated” with that phenomenon by a relation of constant conjunction: a determination that can be done objectively. I argue that Law should unequivocally choose involvement as the interrogation underlying causal terminology because (a) it promotes clarity and avoids ambiguity; (b) it promotes the clear identification of normative issues and provides a more transparent distribution of issues between “causation” and other analytical elements within legal analysis; and (c) it best serves the Law’s very wide range of purposes.

Part I of this article sets out the above argument. Part II sketches the approach of others to the issue of “causation in the Law.”

I. INVOLVEMENT

A. General Laws

The world is out there, seamless and rolling along, manifesting what we call the physical laws of nature in complex confluence and combinations.

* Professor, the Australian National University College of Law; Ernest E. Smith Professor of Law, University of Texas School of Law. This article is dedicated with the deepest respect to Professor David A. Fischer. With thanks to Judith Jarvis Thomson, Jonathan Schaffer, my seminar students at the University of Texas School of Law and especially to the intellectual generosity of Tony Honoré who continues to inspire my interest in causation. A shorter version of this article will appear as a chapter entitled “Causation in the Law,” also dedicated to Professor Fischer, in the OXFORD HANDBOOK OF CAUSATION (Helen Beebe, Peter Menzies & Chris Hitchcock eds., Oxford University Press, forthcoming).

Just as we can deconstruct a particular Van Gogh painting we admire into the three primary colours, so too we can use a variety of limited interrogations to investigate this complex world and discover its underlying building blocks of physical laws.¹ A well-known example is Newton's First Law of Motion: in an isolated system, an object will maintain a constant velocity unless acted upon by an unbalanced force.

We express this latter proposition as a "law" to indicate that it applies (or so it seems on the non-quantum scale) in our natural world. Of course, we can *imagine* other worlds where this proposition does not hold because, for example, miracles happen or witches cast spells, and we can acknowledge that we do not know why it holds in our natural world,² but these possibilities are not the concern of lawyers who are only concerned with our natural world and hypothetical variants of it in which such physical principles hold.

So if we call "medium necessity" the relation that in our natural world (and the hypothetical variants of it in which lawyers are interested) if A does not occur, B also does not occur,³ Newton's First Law of Motion can be expressed in such terms: in all possible relevant variants of our natural world in which an object has not been acted upon by an unbalanced force, deviation from constant velocity does not occur; or, in all possible relevant variants of our natural world, absence of an unbalanced force is "necessary" for an object to maintain constant velocity. We can also state the First Law in terms of "medium sufficiency": in all possible relevant variants of our natural world, that Y did not occur entails that X did not occur. For example: in all possible relevant variants of our natural world, that deviation from constant velocity did not occur entails (i.e. is *sufficient* to establish the truth of the proposition) that the object had not been acted upon by an unbalanced force.

1. Scientists deal with the whole seamless world and have described their project as asking: why is it so? (Julius Sumner Miller); what's the go of it? (James Clerk Maxwell); why things are as they are and not otherwise? (Johannes Kepler). Yet, like everyone else, scientists can only make finite interrogations of the world. It is by multiple precisely characterized experiments that scientists achieve an understanding of how things are in the world, and then express this understanding in terms of physical laws of nature (the origin of which we of course do not know).

2. Richard Feynman, *The Character of Physical Law* (Modern Library 1994).

3. The term philosophers use for "medium necessity" is "nomological necessity." They distinguish it from "strong necessity" (or "metaphysical necessity"), by which they mean necessity in all imaginable worlds, not just those in which our natural laws apply. On such critical distinctions, see Judith Jarvis Thomson, *Some Reflections on Hart and Honoré, Causation in the Law*, in *THE LEGACY OF H.L.A. HART: LEGAL, POLITICAL, AND MORAL PHILOSOPHY* (Matthew Kramer et al. eds., Oxford University Press, forthcoming Sept. 2008).

B. Individual Phenomena and Specified Factors

Armed with such knowledge of general physical laws and other data such as eyewitness testimony of behaviour, we can investigate a particular individual phenomenon. This phenomenon might, for example, be the actual persistence of a specified state (the cannonball resting on Kant's cushion) or the actual transition from a specified state to another (the fall of the apple from the tree onto Newton's head).

Typically our investigations into a particular phenomenon focus on a specified factor – such as a physical force, the absence of something⁴ or a specific piece of communicated information. Importantly in the particular context of the Law, the specification of the factor is precise and often arises from what the Law has mandated: if the Law had mandated that Newton's mother should hold an umbrella above her son's head and Mrs. Newton omitted to do this, one factor of interest would be this absence, specified as "Mrs. Newton's omission to hold the umbrella as mandated."

Often we are interested to compare the actual world of the particular phenomenon (which, of course, includes our specified factor) with a hypothetical world (which we construct by notionally omitting the specified factor and sometimes other factors). By doing this we can then determine, *in the context of that comparison*, the role the specified factor played, if any, in the existence of the actual phenomenon. Importantly in the particular context of the Law, there is often need to consider a hypothetical world, which not only never existed,⁵ but which also is one which in retrospect is known could not have existed. An example of such a world is one in which a retailer would have made a \$30 profit from a farmer fulfilling a contractual promise to deliver peas on a certain day . . . a delivery which turned out to be impossible; in the context of that comparison it is important to understand how it is that lawyers convey meaningful information when they say that the farmer's contractual breach "caused" the retailer to suffer a \$30 "loss" (see below).⁶

4. The Law is often engaged in investigating the role of omissions, for example: when a child dies following a parent's neglect; when a lifeguard, in breach of his legal obligation, fails to try to rescue a toddler drowning in the shallows of the surf; or a statute describes torture in terms of the denial of certain support.

5. For example, suppose that all workers in an industry are exposed to a metal dust that triggers a specific cancer. In breach of a duty mandated by the Law, all employers fail to provide the masks that would have prevented the dust being absorbed. One worker, V, contracts the cancer. Pursuing its interest in the involvement of the breach by V's employer, the Law will consider what would have happened in *the hypothetical world* where V's employer provided masks. A scientist can predict what would have happened in that world where masks were provided by V's employer: namely, assuming V would have worn one (see below), V would not have contracted the cancer.

6. There may also be the problem that there is more than one way to "omit" the specified factor and, the strategies being non-commensurable, it is not self-evident which hypothetical world is of more relevance. For example, there may be two ways

As to the role the specified factor may have played in the existence of the actual phenomenon, it is convenient to separate three forms of role which collectively I call "involvement" in order to avoid circular causal terminology: necessity, duplicate necessity and contribution (though, strictly, contribution subsumes the others, see below). For example, one hypothetical world we might consider is one identical to the actual world except that the specified factor is absent from it. If, by applying our data such as the physical laws of nature, we are confident that in this hypothetical world the particular phenomenon would not have occurred, we can express this information by saying that the specified factor was involved in the existence of the actual phenomenon by being "necessary" for it.⁷

To illustrate: suppose Michael's gardener had undertaken a contractual obligation to Michael to provide a certain amount of artificial watering to Michael's plant (e.g. two litres per day). In the actual world the gardener fails to provide any water to the plant, even though he could easily have done so;⁸ and the plant dies. When Michael sues his gardener for breach of contract: the specific factor of interest to the Law will be the omission by the gardener to water the plant with two litres per day; the particular phenomenon of interest, the one about which Michael is complaining, will be the (actual transition to) the death of the plant; and Michael will only recover compensation from the gardener for the plant's death if the specified factor played some role in that death, for example by being necessary.

To determine whether the gardener's omission was involved in the plant's death by being necessary, the Law can consider, using our understanding of the physical laws of nature and so on, what the fate of the plant would have been in the absence of ("but-for") the specified factor: namely, a hypothetical world in which the gardener did provide the relevant contracted-for amount of artificial watering to Michael's plants. First, suppose that the plant

the operator of a swimming pool might comply with a mandated statutory obligation: either by displaying a warning sign (which probably would not have avoided the relevant drownings); or stationing a lifeguard (which probably would have prevented the deaths). See, e.g., *Haft v. Lone Palm Hotel*, 478 P.2d 465 (Cal. 1970). Another example involves a false statement: is the relevant hypothetical world one in which the statement is made carefully, one in which the statement is made accurately or one in which no statement is made?

7. On the meaning of "necessary" in this context, see *infra* text accompanying note 14.

8. This simplifies the illustration by ensuring that the gardener's conduct is a breach of his contractual undertaking whether that undertaking is determined to be one of mere care to try to achieve a result (here the provision of the water) or one of undertaking to achieve that result. Contrast the situation where the outcome differs if fulfillment of the obligation could not be achieved by the exercise of reasonable care. See *infra* text accompanying and following note 50.

would have flourished had it received that amount of water:⁹ we can express this information by saying that the gardener’s breach of contract was involved in the actual death of the plant, specifically by being necessary.¹⁰ Conversely, suppose the plant would still have died in the same way, time and place had it received the mandated amount of water: again, we can express this information by saying that the gardener’s breach of contract was not involved in that death, at least not in the sense of being necessary for it.¹¹ Note that the information conveyed by the notion of “involvement” is context-specific: it depends, for example, on the specification of the particular phenomenon of interest and the specification of the factor of interest.

As to the data on which we draw to identify a factor’s “involvement” in the particular phenomenon, these include evidence of behaviour and our knowledge of the physical laws of nature, such as Newton’s First Law, which allow us to distinguish between a lawful regularity manifesting the physical laws of nature and the law-like regularity of a mere association such as the epiphenomenal fall of a barometer before a storm.¹²

9. By a parallel method we can conclude that the failure of an astronaut to fire the starboard booster rocket as instructed was involved in the spaceship maintaining a constant velocity and colliding with the small asteroid.

10. Similarly, Mrs. Newton’s omission to hold the umbrella as mandated was involved (by being necessary) in the fall of the apple onto Newton’s head; and gravity was involved (by being necessary) in the cannonball continuing to rest on Kant’s cushion. We can apply this to a well-known illustration from the philosophical literature: suppose B had a legal duty to use reasonable care to prevent S from throwing a rock at a glass window, but that due to B’s carelessness B trips and does not prevent S from throwing the rock and breaking the window (in other words, had B been careful, he would not have tripped and he would have succeeded in preventing S’s rock from breaking the window). We can express this information by saying that B’s carelessness was a factor that was involved in the breaking of the window, specifically by being necessary.

11. Again, by a parallel method we can conclude that the contemporaneous flapping of a butterfly’s wings in the Upper Amazon Basin was not involved in the sense of being necessary (nor, incidentally, in either of the other forms of involvement) in the death of the plant, in the apple hitting Newton’s head, in the cannonball resting on Kant’s cushion, and so on. For case law illustrations, see *Barnett v. Chelsea and Kensington Hospital Management Committee*, [1969] 1 Q.B. 428, and *Jordan v. Jordan*, 257 S.E.2d 761 (Va. 1979).

12. This is the distinction philosophers refer to as the distinction between the “secret” connection and the mere “constant conjunction” of events/states. Another example of the point is the current scientific view that, in a mesothelioma victim the earlier radiological manifestation of pleural plaques is merely epiphenomenal: inhalation of asbestos produced the pleural plaques, and produced the mesothelioma but the pleural plaques did not produce the mesothelioma. See *Johnston v. NEI Int’l Combustion Ltd*, [2007] UKHL 39, [2008] 1 A.C. 281 (U.K.).

C. *The Variety of Interrogations into a Particular Phenomenon*

When we investigate whether a specified factor was involved in the existence of the particular phenomenon, we can use a variety of interrogations ranging from the broadest – was the factor involved *in any way?* – to much narrower interrogations such as explanation or blame. Importantly, these different interrogations yield different sorts of information. For example,¹³ take the case where: due to the carelessness of each of two unrelated hunters, a mountain walker is simultaneously shot by both and the medical evidence is clear that either shot would have been sufficient to result in instantaneous death; and a hunting official who had contractually promised the hunters to shout them a warning about the presence of any walkers had remained silent even though he had seen the mountain walker clearly.

A legal interrogator might ask: do we blame Hunter No. 1 even though the death would have happened anyway (yes). A citizen might ask: did the victim's presence explain his own death (no). A scientist might ask: did gravity play a physical role in the death (yes). It is particularly common for us explicitly to compare an aspect of the actual world with an aspect of a hypothetical world that we have nominated. For example: in order to prevent the death, would the carelessness of Hunter No. 1 have to have been absent (yes); did the carelessness of Hunter No. 1 make a difference to the occurrence of the death (no, the death would have happened anyway); or did the official's breach of promise, an omission, permit the death to occur (yes, had he communicated a warning to the hunters, the death would have been prevented).

In two especially important interrogations we might make when we investigate whether a specified factor played a role in the existence of the particular phenomenon (namely, the "but-for" and "NESS" tests which we meet later in this discussion), the terms "necessary" and "sufficient" are used. In compliance with Judith Jarvis Thomson's recent admonition to lawyers to specify how we are using these terms,¹⁴ let me note that in most legal contexts these terms are not used in the "medium" sense in which physical laws can be stated (see above). Rather, they are the weaker derivative relations we identify when we apply our data (including our knowledge of general physical laws) to an investigation of a particular completely specified phenomenon occurring on a specific occasion. For example, gravity was, we know from an understanding of Newton's Laws, a *necessary* (a "but-for") factor for the specific transition of the apple from the tree to Newton's head. Similarly in the hunters' case, a set of factors comprised of all antecedent factors except Hunter No.2 was, we know from our data, *sufficient* for the occurrence of the

13. Similarly, of a statue we might ask: Who made it? From what raw materials? To what pattern? And for what purpose?

14. Thomson, *supra* note 3. Similarly, philosophers need to reflect on their use of the notion of "preemption" which, without a specified context, is distractingly vacuous. See *infra* text accompanying note 40.

death of the walker where and when he died; and the carelessness of Hunter No.1 was *necessary* for the sufficiency of that set (his carelessness was a so-called "NESS" factor, on which see below).

What does this diversity of possible interrogations, which we can make when we investigate whether a *specified factor* played a role in the existence of the particular phenomenon, have to do with "causation"? The answer is that the different information resulting from these different interrogations is often expressed in the same causal terms. For example, the citizen may express his conclusion from *his* interrogation (namely, into explanation) in terms of the victim's presence not being a "cause" of his death while a scientist might express the conclusion of *his* investigation (namely, into factors that played a physical role in the death) in terms of the victim's presence being a "cause." Because the same causal language has been used to convey different types of information, it is futile for philosophers to search for a coherent freestanding metaphysical account of "causation" unless a choice of underlying interrogation (blame, explanation, physical role, any sort of involvement etc) is specified *at the outset*.¹⁵ Without this initial choice, we simply cannot say whether to be successful such an account must identify the

15. Though the philosopher Jonathan Schaffer gives an account of causation in terms of contrasts between the world and a hypothetical world, he himself finds it incomplete: "the contrasts must be generated from the context. But I don't know how." Jonathan Schaffer, *Contrastive Causation*, 114 PHIL. REV. 327, 350 (2005). The reason for Schaffer's dilemma is that his project is the same doomed project of many other philosophers: a search for "a broad and nondiscriminatory concept" of causation. *Id.* at 344. In contrast to Schaffer's passing flirtation with the idea that such a concept might be "a philosopher's myth," *id.*, the central argument of this article is that it is indeed a myth. I argue that causal language can be used to express information from a variety of interrogations into our world pursued for different purposes: and that it is only once we have chosen which is the underlying interrogation in our dialogue that we can infuse our causal language with unambiguous meaning. Thus, for example, it is only because scientific method requires scientists to expose their choice of interrogation by explicitly recording the parameters of their enquiry, that scientific discourse can proceed unambiguously and indeed it can thereby do so even across language barriers. Whilessoever philosophers ignore the necessity for them to agree on an interrogation (pursued for a clear purpose, be it prevention or blame or explanation etc) to underlie their use of causal language, their discussions of "the concept of causation" will be doomed to proceed at cross-purposes.

A nice illustration of how philosophers' failure to agree on the underlying interrogation leads to discussions at cross-purposes is the debate about the desert traveler problem: just before V ventures across a desert, Enemy No. 1 poisons V's only water keg; later Enemy No. 2 drains the poisoned water from the keg; V later dies of thirst. Here, *even when all the facts are agreed*, commentators disagree on which party/parties are "causes." See, e.g., Tony Honoré, *Necessary and Sufficient Conditions in Tort Law*, in PHILOSOPHICAL FOUNDATIONS OF TORT LAW 363, 378 (David G. Owen ed., 1995). The disagreement is not, by definition, about the facts, but it reveals there is a disagreement about the underlying interrogation the results of which we are reporting when we use causal language.

mountain walker's presence as a "cause" of his death; or identify it as "not a cause" of it.

Similarly, in the important context of the Law lawyers must designate the underlying interrogation the results of which we are reporting when we use causal language for legal purposes. Here lawyers are at a considerable advantage relative to philosophers because the legal project is always focused and specified: was it A who stabbed B? Did the lie that C told A prompt A to stab B? And so on. In this sense there is a significant affinity between the Law and the precise focus that characterises a scientific experiment, a focus that is achieved by the application of scientific method (which requires explicit specification of the particular phenomenon under investigation, the specified factor whose role is in issue and so on).¹⁶ It is because the lawyer's project is focussed that lawyers can render their use of causal language unambiguous by a prior specification of the particular interrogation to which their causal usage will relate and therefore what information is being conveyed by that terminology. Just as Newton salvaged foundational concepts such as space and motion from "the haze of everyday language"¹⁷ by giving them a precise meaning, so lawyers must secure for the Law's notion of "cause" a precise unambiguous meaning by choosing as its underlying interrogation just one enquiry of the world that unambiguously yields information about just one connection.

Unfortunately, in the past lawyers have not agreed on which interrogation underlies their use of causal terminology nor, therefore, to what information "causation" refers in the Law. For example, some have thought the appropriate interrogation was a narrow one dealing with blame so that a "cause" could only be a blameworthy factor; others argued for a limited "physics-based" interrogation which excluded normative concerns; others seemed to advance the circular idea that "causation in the Law" should track the current

16. Even when results of scientific experiments are reported in causal terminology, this methodological context makes the meaning clear even across language barriers. See, e.g., A.H. Bittles, *Evidence For and Against the Causal Involvement of Mitochondrial DNA Mutation in Mammalian Ageing*, 275 *MUTATION RESEARCH* 217 (1992). In other words, the reason that scientists do not debate the meaning of "causation" is that, in relation to individual experiments, the detailed specification of the experiment (which is demanded by scientific method) makes manifest which interrogation underlies their use of causal terms and therefore what information about the world those terms convey. Moreover, in relation to the physical laws of nature, physicists can describe them without the idea of causality at all by using a minimum principle known as "the principle of least action." FEYNMAN, *supra* note 2, at 46. This in turn means that when a scientist uses these laws to investigate a particular phenomenon, that transition to or persistence of a state can be understood in terms of the environment of restraints and increasing entropy. When a factor operates as a restraint within the system it can be seen to be "involved" in the state or transition. For example, a tiny wax bubble in a lava-lamp is "involved" in the dynamic motion of the liquids because it can be seen as a constraint on the system.

17. James Gleick, Isaac Newton 7 (2003).

usage of causal terms by ordinary people in which normative and non-normative information were merged; while some even resorted to the non-sequitur device of merely asserting that a factor was a cause by virtue of "intuition" or "common sense." As we see in Part II, this diversity of usage resulted in notorious confusion that limited the value of past theoretical accounts of "causation in the Law." More importantly, this conceptual indeterminacy presented grave problems for the practice of the Law, where the stakes can be very high, where issues must be authoritatively resolved in the here and now, and where clarity of analysis is a critical goal.

Involvement can be in the form of necessity, duplicate necessity or contribution

The most appropriate choice of interrogation to underlie causal terms in the Law is not self-evident and could be influenced by a number of concerns on which reasonable minds might differ. Nevertheless, I now argue¹⁸ that, given the range of investigations modern Law needs to make, lawyers should choose an interrogation underlying causal usage in the Law that captures *all ways in which the factor might be involved* (identified by our knowledge of the physical laws of nature, evidence of behaviour and so on) in the existence of the particular phenomenon in issue.

As we have seen, one form of involvement is necessity: the factor is necessary for the existence of the phenomenon. For example, in our first version of the plant example the omission by the gardener to water Michael's plant with 2 litres per day was necessary for the death of the plant. In practice, in most litigated cases the factor targeted by the Law was either involved in the existence of the particular phenomenon by a connection of necessity or was not involved in its existence at all. For example, in the death of the mountain walker, our understanding of the physical laws of nature and so on not only allows us to determine that the walker's presence and gravity were both involved in the walker's death (in the form of being necessary for it) but also that the official's contractual breach was too. Needless to say, by the same process we can determine that the contemporaneous flapping of a butterfly's wings in the Upper Amazon Basin was not involved in the walker's death at all.

Nevertheless, sometimes another form of involvement in the existence of the particular phenomenon is important in the Law: duplicate necessity. The Law is concerned to compare the particular phenomenon in the actual world with a subset of the factors in the actual world. This subset is identical to the actual world except that it does not contain a factor that, in the actual world, duplicates the role of the specified factor. If in this subset the particular phenomenon would have occurred but only because of the presence of the

18. Accordingly, and to the extent necessary, I hereby happily recant any of my earlier ideas that are inconsistent with the approach outlined in this paper.

specified factor (i.e. in a hypothetical world formed by this subset with the specified factor removed the particular phenomenon would not have occurred), we can express this information by saying that the specified factor was involved (in the form of duplicate necessity) in the existence of the particular phenomenon in the actual world.

For example: in the hunters' case the careless shot of Hunter No.1 was not necessary for the walker's death (having been duplicated by Hunter No. 2) yet we know from our understanding of the physical laws of nature that, absent the careless shot of Hunter No. 2, the careless shot of Hunter No.1 would have been involved in the death by a connection of necessity. This form of "duplicate" involvement leading to an "overdetermined outcome"¹⁹ is clearly of interest to the Law. The most convenient way to accommodate this interest is if the interrogation underlying causal usage in the Law identifies

19. Philosophers sometimes fail to appreciate that the notion of "overdetermination" is ambiguous without clear specification. For example, some use the term to mean "where something is caused by two different causes that are both sufficient," Martine Nida-Rümelin, *Qualia: The Knowledge Argument*, in THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Sept. 3, 2002), available at <http://plato.stanford.edu/entries/qualia-knowledge>. Others give it a broader meaning. For example, Ned Hall gives the following example: Suzy and Billy "both pick up rocks and throw them at [a] bottle, but Suzy throws hers a split second before Billy. Consequently, Suzy's rock gets there first, shattering the bottle. Since both throws are perfectly accurate, Billy's would have shattered the bottle if Suzy's had not occurred, so the shattering is overdetermined. . . . Suzy's throw is a cause of the shattering, but Billy's is not." Ned Hall, *Two Concepts of Causation*, in CAUSATION AND COUNTERFACTUALS 225, 235 (John Collins, Ned Hall & L. A. Paul eds., 2004).

I will restrict use of the "overdetermination" term to an outcome that, in the absence of a duplicative involved factor, would have happened at exactly the same time and place: what philosophers sometimes call "symmetrical overdetermination." Thus, in my terminology: the outcome formulated as the "the walker's death" at the relevant time and place is overdetermined (because, in the absence of Hunter No. 1, it would have happened at exactly the same time and place) but the outcome formulated as "the walker's death by two bullets" at the relevant time and place is not overdetermined; and a death at time T1 which, but-for a specified factor, would have occurred later at T2, is not overdetermined.

Of course, the Law could choose to individuate this outcome sufficiently minutely (or as a philosopher might say, to increase how "modally fragile" its description is) that the walker's death would not be overdetermined because its molecular detail would be different according to whether Hunter No. 1, Hunter No. 2 or both shot. But the Law does not choose to do so. Put simply, the Law chooses the level of individuation (modal fragility) of the factor and outcome to suit its purposes (*see infra* text accompanying notes 44 and 47). Note, however, that some outcomes are irreducibly overdetermined. For example, suppose X will enter a certain transaction if A or B advise X to do so. In fact both A and B give X that advice and X enters the transaction. Here there is no obvious way to express the outcome (i.e. entry into the transaction) that avoids it having the character of being "overdetermined" (as I have defined the term).

this duplicate form of involvement. In other words, the Law should choose an interrogation underlying causal usage that identifies duplicate involvement as a “cause.” This would facilitate the identification of all possible strategies for prevention (one of which would require elimination of both shots). It would also allow the victim’s estate to sue either hunter under a legal rule that mandated that the individual defendant had been a “cause” of the death.

The third form of involvement in the existence of a phenomenon that is of importance to the Law is that of contribution: indeed, it is the fundamental form which subsumes necessity and duplicate necessity which are both types of contribution. Consider a subset of the factors in the actual world which is identical to the actual world except that it lacks factors which are excess to what is sufficient for the existence of the phenomenon. If, in this subset, the particular phenomenon would have occurred but only because of the presence of the specified factor (i.e. in the hypothetical world formed by this subset with the specified factor removed the particular phenomenon would not have occurred), we can express this information by saying that the specified factor was involved (in the form of contribution) in the existence of the particular phenomenon in the actual world.

For example, consider the situation where the 9 members of a club’s governing committee unanimously vote in favour of a motion to expel Member X from the club, where a majority of only 6 was needed under the club’s rules. The vote of Committee Member No.1 is neither necessary nor sufficient for the motion to pass. This is true of the vote of each member, yet the motion passed. Each voter must have played a role in the passage of the motion: a role I call “contribution” to the existence of the particular phenomenon. The Law is concerned to identify the contribution of individuals such as Committee Member No.1 in such contexts. This can be done by considering a subset of factors identical to the actual world except it lacks the votes of Committee Members Nos. 7, 8 and 9 (in other words, factors which are excess to what is sufficient for the motion to pass). In this subset the motion would have passed but only because of the presence of the vote of Committee Member No.1. We can express this information by saying that the vote of Committee Member No.1 was involved (in the form of contribution) in the motion passing.

Again, the most convenient way to accommodate the Law’s concern with the conduct of Committee Member No.1 is if the interrogation underlying causal usage in the Law is wide enough to identify this contribution form of involvement. In other words, the Law should choose an interrogation underlying causal usage that identifies contribution as a “cause”, even where the factor is neither necessary nor sufficient for the existence of the particular phenomenon. This would, for example, allow the state to prosecute an individual committee member under legal rules that only penalise conduct by an

individual defendant if he or she had been a “cause” of the decision of the club’s governing committee.²⁰

As we will see, modern lawyers are fortunate to have an algorithm broad enough to identify all 3 forms of involvement when operated in the light of sufficient data including evidence of behaviour and our knowledge of the physical laws of nature: this is the “NESS” algorithm originating in the work of Hart and Honoré.²¹

D. Summary so Far . . .

When we investigate a particular phenomenon (the persistence of a state or a transition between states) we are often interested in the role of a specific factor (such as a physical force, the absence of something, a specific piece of communicated information and so on) in the existence of that phenomenon. By comparing the actual world of the particular phenomenon with a hypothetical world (which we construct by notionally omitting the specified factor and sometimes other factors) we can determine, *in the context of that comparison*, the “involvement”, if any, of the specified factor in the existence of the actual phenomenon. It is by using data such as our understanding of the physical laws of nature and evidence of behaviour that we determine whether our specified factor was involved in the existence of the actual phenomenon. That data also allow us to distinguish, on an objective basis, whether this involvement is in the form of necessity, duplicate necessity or contribution.

E. Why Involvement is the Appropriate Choice of Interrogation to Underlie Causal Terminology in Law

That causal terminology in the Law should derive its meaning from a wide underlying interrogation that has been “constructed” to provide specified information about the world (namely, involvement in any of its forms) is not a problem since this is always the case with the use of causal terms (see above). Similarly, the choice of using causal terminology in the Law to refer to this broad relation of involvement presents no problem of “over-inclusiveness” (that is, “too many causes”) because doctrinal filters ensure the legal enquiry is tightly focussed.²² Moreover, using causal terminology in the Law to refer to involvement (of a specified factor in the existence of a partic-

20. At this point it is worth mentioning that a legally relevant factor (such as a breach of duty) that is involved in an outcome in this way, may nevertheless be dismissed as irrelevant by the Law if the extent of its contribution is regarded as too small for it to be worthwhile to devote the Law’s resources to it (this is the “de minimis” doctrine).

21. H.L.A. HART & A.M. HONORÉ, CAUSATION IN THE LAW 105 (1st ed. 1959).

22. A parallel is how the constraints of scientific method ensure that the results of experiments can be expressed unambiguously in causal terminology.

ular phenomenon) has two positive advantages over alternative approaches to what should be denoted by causal language in the Law.

First, it provides the width of coverage that is needed to accommodate smoothly all the many diverse enquiries the Law makes.²³ For example, in the hunters’ case one project of the Law might be to consider all possible regulatory strategies for preventing such deaths. Such a project requires the Law to address all involved factors – even those that some might describe as “mere conditions,” such as the walker’s presence. This is because the most efficient strategy may be, for example, to ban mountain walking during the hunting season.²⁴ Were lawyers to select as the interrogation underlying causal language in the Law a narrower one that only identified those involved factors that were blameworthy or explanatory or “abnormal,” this regulatory project might be inhibited.

Similarly, the Law may need to address the involvement of a factor in an outcome that is merely “coincidental” (that is, where factors of that type do not generally increase the probability of outcomes of the designated type). Illustrations of such coincidental outcomes include: when illegal speeding happens to bring a car next to a falling tree that crushes the passenger; or when the dishonesty of a first wrongdoer results in the money of the victim being invested in a company the share price of which later collapses when the market discovers the unrelated fraud of a company official.²⁵

Also, context provides meaning. Suppose the context of the legal enquiry is specified as follows: that the particular phenomenon of interest is the transition of the apple onto Newton’s head; that the specified factor is Mrs. Newton’s omission to hold the umbrella as mandated by the Law; and that we are comparing the actual world with a hypothetical world in which she met her legal obligation (i.e. a hypothetical world in which her breach of obligation was absent) in order to determine, in the context of that comparison, any role that her omission played in that transition. In this specified context it is as meaningful to state that Mrs. Newton’s omission was “involved” in, was a

23. While excluding non-involved factors such as the contemporaneous flapping of a butterfly’s wings in the Upper Amazon Basin.

24. Another illustration of how the Law may focus on a factor that ordinary folk may think of as no more than a background condition is where legal change is suspected or shown to be involved in social phenomena, such as a finding that the legalization of abortion in *Roe v. Wade* in 1973 was a “cause” of the reduced crime rates in the US in the 1990s. STEVEN D. LEVITT & STEPHEN J. DUBNER, *FREAKONOMICS: A ROGUE ECONOMIST EXPLORES THE HIDDEN SIDE OF EVERYTHING* 125-30 (Penguin 2005).

25. For example, in *Fottler v. Moseley*, 70 N.E. 1040, 1040 (Mass. 1904), the plaintiff had ordered the defendant-broker to sell his stock in a company but, as a result of the fraud of the broker, the plaintiff remained in the stock. The stock later dropped in price when the market discovered that a corporate officer had embezzled funds. This second fraud was held not to relieve the defendant of liability from the loss flowing from the second fraud even though that fraud was not contemplated by the defendant-broker. *Id.* at 1040-41.

“cause” of, the apple hitting Newton’s head, as it is when a scientist concludes that a “cause” of that transition was the presence of gravity.²⁶ In both it is the specified nature of the enquiry that imbues with meaning conclusions expressed in terms of “involvement” or “causation.”

Secondly, because “involvement” is identified by our knowledge of the physical laws of nature, evidence of behaviour and so on, it carries the potential for the concept of causation in the Law to be untainted by normative interrogations and controversies (though, of course, prior doctrinal filters such as duty doctrines as well as the rules of *proof* of causation and their exceptions are normative determinations).²⁷ So when the Law chooses involvement to be the interrogation underlying causal usage, this ensures that normative concerns are located elsewhere in the legal analysis where traditionally they are more likely to be exposed as normative and evaluated accordingly.

For example, suppose A inadvertently discloses to X a fact about V that enrages X, B encourages X to kill V,²⁸ C knows X is planning to kill V and does nothing to stop X, D suspects X wants to kill V but gives him a gun anyway, E threatens to kill X unless X kills V, and X shoots V dead. A, B, C, D, E and X are all involved in the death of V. By choosing an interrogation underlying causal usage in the Law that identifies but does not distinguish between all different forms and contexts of involvement, we allow each of these parties to be identified as a “cause” of the death.²⁹ This would then require us to locate the normative controversies about their different degrees of *responsibility* for the death under analytical labels such as “duty,” “breach,” “aiding and abetting,” “complicity,” “inducement,” “duress,” “solicitation” and so on. The great attraction of this approach is that under these analytical labels, unlike the label of “causation,” it has traditionally been unacceptable merely to assert a conclusion on the basis of “intuition” or “common sense.”

26. Similarly, it can be meaningful to say that the omission of an astronaut to fire the starboard booster rocket *as instructed* was a “cause” involved in the spaceship maintaining a constant velocity and colliding with the small asteroid. See also *supra* text accompanying note 6 explaining how a farmer’s breach of contract “caused” a \$30 loss of profit to a retailer.

27. For a discussion of the causal fictions created by U.S. courts to facilitate proof of causation in asbestos cases, see Jane Stapleton, *Two Causal Fictions at the Heart of U.S. Asbestos Doctrine*, 122 L.Q.R. 189 (2006) (U.K.). U.K. courts have been more Realist in their candor. See, e.g., Jane Stapleton, *Lords a’Leaping Evidentiary Gaps*, 10 TORTS L.J. 276 (2002).

28. For example, where the defendant solicited another to kill the victim, and the solicited person did kill the victim, the defendant is liable as an accomplice to the killing, and may be convicted of murder. See *State v. DePriest*, 907 P.2d 868, 874 (Kan. 1995).

29. Alas, criminal law has often not achieved this clarity.

F. Concerns of Philosophers That the Law Can Ignore

Traditionally, lawyers disdained philosophical enquiries into "causation" as being too abstract or vague. In my opinion this indifference is warranted because typically these enquires proceed without a choice of underlying interrogation being explicitly specified at the outset. Nor do philosophers seem to agree on which underlying interrogation their casual expressions refer to. Some seem to use the "intuition" of "folk" (or more correctly non-empirical assertions of linguistic usage) as the benchmark against which a philosophical account of "causation" is assessed, even though usage is contingent on time and place.³⁰ Others seek to bathe their account of "causation" in scientific respectability by reference to a crude push-pull concept of physics,³¹ one that ignores the role that comparison and absences play in scientific accounts and understandings such as Newton's First Law of Motion. Yet, as I argued above, since causal language has been used to express the results of quite different interrogations of the world, it will never be possible to formulate a reductive algorithm that will detect when some factor is, metaphysically, a "cause" unless a choice of underlying interrogation has been specified at the outset.

In any case, by its very nature the social practice of the Law can afford to ignore many issues that philosophers find problematic. Just as in everyday life, in the Law we can accept: that time is not reversible; that the physical world manifests fundamental laws of nature; that "God does not play dice," so that given a sufficiently detailed description of initial conditions within a closed system, the state of that system at a later time may be calculated according to fixed laws of nature; and that, though the world is deterministic, proof of its phenomena may have to resort to probabilistic evidence. Similarly, the epistemic concerns of philosophers, such as Hume and Leibnitz (both legally-trained), are subsumed within the Law's acceptance of expert scientific evidence (even when based on induction), witness statements and so on.³²

30. As with any conceptual analysis that emerges from folk intuitions, this approach is somewhat "hard to distinguish from banal descriptive sociology of the Gallup-poll variety." Brian Leiter, *Naturalism in Legal Philosophy*, in THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2002), available at <http://plato.stanford.edu/archives/win2002/entries/lawphil-naturalism>.

31. Of course our interrogations may often be narrowed in this way. For example, when an aircraft ascends in the sky, the interrogation of whether a specified factor had "exerted a force" would identify the pressure of air below the aircraft and not the air pressure above it. As the plane ascends, air passes over the top of the wing faster than the air passing underneath; the air pressure above the wing will be lower than below the wing (Bernoulli's Principle). We can express this phenomenon as the wing being "forced" up by the higher air pressure under the wing. Alternatively, a scientist might not narrow the ways he expresses the phenomenon to "forces" and describe it in terms of the plane being "sucked" up by the area of lower pressure.

32. See *supra* note 12.

Moreover, in contrast to metaphysics, the conceptual framework and methodology of the Law provide filtering devices³³: that specify a small finite number of factors whose possible involvement in the existence of a particular phenomenon is subject to investigation; that pinpoint which particular phenomenon in the actual world is being examined; that specify relevant hypothetical comparator worlds; and that, within both the actual world and relevant hypothetical worlds, individuate the factor and the phenomenon of interest given the purposes of the legal enquiry, an individuation that often excludes the problems of pre-emption that perplex philosophers.

The central importance of these doctrinal filtering devices may be overlooked by non-lawyers, so I will illustrate their operation using the area of the Law on which most theoretical discussions of “causation in the Law” focus: the tort of negligence.³⁴ At this point I should emphasize that the role of causal language in the criminal law is so complex, not to say confused, that space precludes me from addressing it in this forum.

The tort of negligence is a species of legal claim, a “cause of action,” which a plaintiff may initiate against a defendant. Suppose a parent, D, fails to control their two-year-old infant who runs out into the path of a moving vehicle which swerves and breaks the leg of a pedestrian, P. On the way to hospital, the ambulance carrying P is struck by lightning and P is seriously burnt. P sues D in the tort of negligence for his broken leg and burns. To succeed in the claim P must prove, on the balance of probabilities, all five doctrinal “elements” of this cause of action.

The first three elements are: that the interference of which P complains is recognized as a form of “actionable damage”; that D owed P a “duty of care”; and that some aspect of D’s conduct was a breach of that duty because it fell below the standard of care that a reasonable person would have met in the circumstances. The fourth element is the “causation” requirement: that this breach was a “cause” of the “injury” of which P complains. The terminology of the fifth element varies: in the US the requirement is generally said to be that the breach was a “proximate cause” of the injury; while in the non-US common law world the requirement is said to be that the injury must not be “too remote” a consequence of the breach. Functionally, this fifth element

33. In science these filtering devices are created by fixing the boundary phenomena within which the experiments are run such as temperature, pressure and so on.

34. There is, however, a lively literature in the criminal law field concerning the relation of mental state, conduct and consequence. See, e.g., Alan Brudner, *Own- ing Outcomes: On Intervening Causes, Thin Skulls, and Fault-Undifferentiated Crimes*, 11 CAN. J.L. & JURISPRUDENCE 89, 94 (1998). Many modern criminal theorists separate the involvement question from the question concerning how far down the stream of consequences criminal culpability should extend. Contrast Tadros, who conflates conduct, involvement and attribution of consequences: “Causal enquiry . . . is sensitive both to moral factors and to states of mind of the defendant.” VICTOR TADROS, *CRIMINAL RESPONSIBILITY* 156 (Oxford University Press 2005).

sets the normatively appropriate scope of liability for consequences of breach by D: only certain of the infinite stream of consequences of the breach will be judged to be appropriately attributed to the defendant's breach for the purposes of legal liability. There is a strong modern move to rename this normative determination of which consequences a defendant should be legally responsible for, as the "scope of liability" issue.³⁵ In this article I will refer to it as the "proximate cause"/"scope" issue.

Taking the elements in turn: the Law specifies (that is, it is a question of law to be decided by judges) whether the type of injury of which P complains is actionable damage in the relevant species of legal claim. Whether a duty is owed is also a question of law. For normative reasons the Law does not often impose a duty of affirmative action to control the conduct of others; so in our example this "duty" element provides a very effective filter. The fact that there were an infinite number of people who failed to control the infant is not a problem since the Law will have imposed a duty to control the infant on only a tiny number of them, such as the infant's parents. Claims against others will fail at this early stage in the legal analysis.

Next, the plaintiff must specify the aspect of the defendant's conduct that he claims fell below the standard of reasonable care: this is termed "the tortious aspect" of D's conduct³⁶ or D's "breach" of the standard of reasonable care. Much rides on this formulation. First, the judge or jury may not accept that a reasonable person would have behaved as the plaintiff alleges the defendant should have behaved. Suppose, in the infant case, P alleges that a reasonable person in D's situation would have kept the infant at home at all times and that, therefore, D's failure to do so breached the standard of reasonable care. Such a claim of breach will not succeed because such a failure manifestly does not fall below the reasonable parental standard. If, however, the full facts were that D failed physically to restrain the infant as they attempted to cross an unmarked busy multi-lane highway, the allegation that this constituted a breach of the mandated standard of reasonable care is likely to be accepted.

Secondly, the plaintiff's individuation of the breach allegation can affect plaintiff's chances of establishing, as he must, that the breach qualified as a "cause" of the relevant phenomenon. This is because it is the plaintiff's individuation of the breach allegation which, if accepted by the Law as reflecting

35. Jane Stapleton, *Legal Cause: Cause-in-Fact and the Scope of Liability for Consequences*, 54 VAND. L. REV. 941, 945 (2001); Jane Stapleton, *Cause-in-Fact and the Scope of Liability for Consequences*, 119 L.Q.R. 388 (2003) (U.K.) [hereinafter Stapleton, *Cause-in-Fact*].

36. A neat illustration is this: D gives a loaded revolver to B, a boy of eleven, to carry to C. In handing the revolver to C, B drops it, crushing the bare foot of another child, E. The aspect of D's conduct that is wrongful is the fact that the gun he handed to B was loaded. In this case, the loadedness of the gun was not involved in the injury to E. See generally Richard Wright, *The Grounds and Extent of Legal Responsibility*, 40 SAN DIEGO L. REV. 1425, 1494 (2003).

what a reasonable person would have done, constitutes what I have been calling the “specified factor”;³⁷ and the specified factor in turn determines the hypothetical worlds (because these are no-breach worlds) against which we investigate any involvement of that factor in the existence of the actual phenomenon.

To illustrate the importance of this, take this example: P2 is working on scaffolding when he slips in wet conditions and falls off breaking his arms. Had P2 been wearing a safety harness he would not have fallen. P2 sues his employer complaining about (the transition to) his broken arms. Suppose first that when P2 sues his employer, P2 frames his breach allegation as “on the day of my accident my employer did not supply me with a harness as a reasonable employer would have done.” To determine whether the specified factor (the employer’s failure to supply the harness) was involved (in the sense of necessity) in the breaking of P2’s arms, the Law considers what the fate of P2 would have been in the hypothetical world where there was simply no breach: namely had the employer supplied the harness to P2. If there is evidence that on those days when the employer *had* actually supplied a harness to P2, P2 chose not to wear it, P2 will be unable to show that the employer’s breach was involved in his injury by a connection of necessity: the breach was not necessary for the breaking of the arms; in the hypothetical no-breach world, P2’s arms would still have been broken.³⁸

In contrast, P2 could have used a different individuation of the breach allegation which would have marginalised the past evidence about P2’s conduct. Suppose P2 alleges the breach consisted of “failing to supply a harness to P2 and failing to have a workplace system that prevented an un-harnessed employee ascending the scaffolding.” Again, to determine whether *this* specified factor was involved (in the sense of necessity) in the breaking of P2’s arms, the Law considers what the fate of P2 would have been in the hypothetical no-breach world: namely had the employer supplied the harness to P2 and had a workplace system that prevented an un-harnessed employee ascending the scaffolding. Now the evidence that on those days when the employer *had* actually supplied a harness to P2, P2 chose not to wear it, is of little relevance and the plaintiff is likely to be able to establish that *this* breach was involved in P2’s broken arms by a connection of necessity: if the breach had been absent (i.e. in the hypothetical no-breach world where the employer supplied the harness to P2 and had a workplace system that prevented an un-harnessed employee ascending the scaffolding), P2’s arms would probably not have been broken.

37. Stapleton, *Cause-in-Fact*, *supra* note 35, at 391.

38. As we will see, the NESS algorithm allows a subset and corresponding no-breach hypothetical to be designated in such a way as to test for involvement by a connection of necessity, or of duplicate necessity or of contribution. On whether P2 would also fail to establish this breach was involved in his injury by a connection of duplicate necessity or of contribution, see *infra* text accompanying note 166.

Moreover, the individuation of the breach allegation itself provides the individuation needed when testing whether the specified factor was involved (e.g. in the sense of necessity). Suppose a motorist is speeding at 60mph in breach of his duty to abide by a 50mph speed limit, he skids and is unable to recover control of his vehicle before it hits V. The Law determines what would have been the highest speed a reasonable person would have been going in the circumstances, say 45 mph. When the Law considers what the fate of V would have been in the hypothetical no-breach world, the defendant's behaviour is altered *just* enough to bring it into conformity with his duty as mandated by the Law, namely 45mph. To test whether the motorist's breach was involved by a connection of necessity in V being injured in the way he complains about, we ask whether the motorist still would have skidded and hit V had he been driving at 45mph³⁹ and, if so, which injuries V would have suffered.

Let me now turn to an area that is of considerable recent controversy among philosophers: preemption. Just as when we investigate a particular phenomenon using our data such as the physical laws of nature, the notions of "necessity," "sufficiency" and "involvement" derive their meaning and coherence from the specificity with which we characterise that investigation,⁴⁰ so too the value of the notion of "pre-emption" depends on such specification. Without it, we are left with the vacuous determination that, for example, when I break an egg, I also "pre-empt" anyone else breaking that egg at any time in the future, whether that "pre-empted factor" appears imminent, merely possible etc.

Thus, the fact that the Law requires the precise specification of its investigation – including for example the precise specification of the factor in issue (e.g. the precise breach allegation) and the particular phenomenon in whose existence that specified factor may have been involved in some way – explains why, unlike many philosophers, the Law sees no problematic "pre-emption" issue where the specified factor prevented another factor from preventing a specified outcome. For example, suppose that, as a result of the defendant's wrongful conduct, either by act or omission, there is no stop sign at a road crossing. This absence prevents a careful motorist being alerted to the need to stop and thereby avoid a collision with another driver, V. That collision occurs and knocks V unconscious. To determine whether the defendant's wrongful conduct was involved (in the sense of necessity) in V being rendered unconscious, the Law considers what V's fate would have been in the absence of the wrongful conduct: that is, where the defendant had conducted himself lawfully and as a result a stop sign was present. With a stop sign present, the driver would likely have stopped and the injury to V would

39. The problem is somewhat more complex than I have indicated in the text: had D been driving at 45 mph for some time, the pedestrian may have already safely reached the other side of the road before D came upon the scene.

40. See *supra* text following note 14.

have been avoided. Once this context is specified lawyers can coherently express this information as the defendant's wrongful conduct being involved in, that is a "cause" of, V being rendered unconscious.

Similarly, it is the Law that individuates the outcome of which complaint can be made. For example, suppose a boy fell from a high bridge spanning a vast canyon but on the way down he hit and was fatally electrocuted by power lines strung carelessly and in breach of duty by a power company. When his estate claims against the company, the Law requires that the estate specify the outcome precisely as "death by electrocution at that instant" rather than, say, "death on that day." The fact that his death was certain to have happened seconds later by a lethal back-up phenomenon (crushing impact with the canyon floor) will therefore be irrelevant to the particular phenomenon of interest to the Law (namely, the actual death of the boy by electrocution at that instant) and will therefore be irrelevant to the question whether the company was a "cause" of and liable for the "death" as individuated in this way. (The boy's prospects are, of course, relevant to how much the company will have to pay in damages because this "valuation" of the claim is calculated in relation to how long the boy would have lived had no tort been committed against him.)

Legal doctrine's individuation of outcome renders irrelevant many other "pre-emption" complications perceived by philosophers. For example, suppose X plants a bomb under V's bed timed to explode at 2 a.m., but Y places another bomb under the bed, which is timed to, and does, explode at 1 a.m. killing V instantaneously. While some philosophers are troubled by such cases, in Law no issue of Y's bomb pre-empting X's bomb is relevant because X's bomb did not,⁴¹ and with hindsight we know was never going to, result in V's actual *death by explosion at 1 a.m.*⁴² It is irrelevant that the 2 a.m. bomb seems to guarantee "death."⁴³ Moreover, since the Law is concerned with the result individuated at the time and place it occurred, most lawyers would not regard V's death as "overdetermined."⁴⁴

Even where X plants a bomb under V's bed timed to explode at 2 a.m., and Z *replaces* it with another bomb timed to explode at 2 a.m., the Law has no difficulty in acquitting X from any involvement in V's death by explosion at 2 a.m., given what we know about physical laws and evidence of beha-

41. Indeed, Y's bomb may well have destroyed X's bomb, thus preventing it from even exploding at 2 a.m.

42. Hence Richard Wright falls into manifest error when he claims that when two fires are both sufficient to burn down a house and fire No.1 reaches the house first and burns it down, "the but-for test (erroneously) fails to treat the first fire as a cause of the destruction of the house." Richard Wright, *Acts and Omissions as Positive and Negative Causes*, in EMERGING ISSUES IN TORT LAW 287, 298-99 (Jason W. Neyers, Erika Chamberlain & Stephen G. A. Pitel eds., 2007).

43. Such a "guarantee" does not make the 2 a.m. bomb a cause of the actual "death at 1 a.m.": the 2 a.m. bomb is pre-empted by the 1 a.m. bomb.

44. See *supra* note 19.

viour.⁴⁵ This will still be the situation if Z's bomb had been timed to, and did, explode at 1 a.m., hastening what would, save for Z's conduct, have been V's time of death, namely 2 a.m. Similarly this is so even if Z's replacement bomb had been timed to, and did, explode at 3 a.m., delaying what would, save for Z's conduct, have been V's time of death. The Law will not ignore the incontestable physical fact that for a bomb to be involved in the actual outcome, which is individuated to the actual time and place it occurred, that bomb had to have been present at the time of the lethal explosion! Again the issue of what would have happened to V had it not been for Z merely goes to "valuation."

On the other hand, the Law distinguishes, for clear normative reasons, the role of distinct actors and this affects the acceptable individuation, not just of the factor whose involvement is in issue, but also the acceptable degree of individuation of the outcome. Take our earlier case where a mountain walker is simultaneously shot by two unrelated hunters and the medical evidence is clear that either shot would have been sufficient to result in instantaneous death. Since the Law is concerned, *inter alia*,⁴⁶ with the role of individual defendants,⁴⁷ it focuses not on whether the "cluster" of the conduct of the two hunters was involved in an outcome whose delineation is as finely grained as "death by two bullets at the relevant time and place," but whether a specified hunter was, treated as an individual, involved in an outcome whose delineation is less finely framed in terms of the walker's "death at the relevant time and place."

G. Involvement in (a "cause" of) what? Injury? Damage to Normal Expectancies?

Finally, we must note a complexity found in legal analysis that is not present in philosophical debates about "causation." Law is interested not only in whether the specified factor was involved in the existence of a particular phenomenon but also in whether that phenomenon constituted "damage"

45. Our basic scientific understanding of the world shows us that, to be involved, X's bomb must, *inter alia*, remain planted at the relevant time and in the relevant place at which the explosion occurs.

46. Sometimes the Law is only concerned by the conduct of an individual when others are similarly conducting themselves. See Public Order Act, 1986, § 1 (Eng.) – Riot ("(1) Where 12 or more persons who are present together use or threaten unlawful violence for a common purpose and the conduct of them (taken together) is such as would cause a person of reasonable firmness present at the scene to fear for his personal safety, each of the persons using unlawful violence for the common purpose is guilty of riot.").

47. With all due deference to J.L. MACKIE, *THE CEMENT OF THE UNIVERSE: A STUDY OF CAUSATION* (1974); see also ARNO C. BECHT & FRANK W. MILLER, *THE TEST OF FACTUAL CAUSATION IN NEGLIGENCE AND STRICT LIABILITY CASES* 17-18 (1961). See also *supra* note 19.

to the complainant's "normal expectancies," a point determined by normative doctrinal rules. In the simplest case, this point is where the complainant would have been had the defendant met his legal obligations.⁴⁸ These distinct issues should not be confused; in particular, the "damage" issue should be kept separate from the issue of "causation" in the law.⁴⁹

For example, we saw in the earlier illustration concerning a club's governing committee unanimously voting to expel Member X, that the vote of Committee Member No.1 was involved (in the form of contribution) in the motion passing and the associated injury to X's interests. Suppose further: that Committee Member No.1 breached a legal duty of care to X by failing to read any of the documentary material concerning the motion to expel X; that, had Committee Member No.1 met his legal obligation and voted with care and good faith, he would have voted against expulsion; but that all other committee members *had* met their legal obligations and had voted with care and good faith. Though Committee Member No.1 was in breach of his legal duty of care and this breach was involved (in the form of contribution) in the motion passing and X suffering the *injury* of expulsion, X has not suffered any legally recognized "*damage*" to his normal expectancies because, had all members met their legal obligations, the motion for expulsion would still have passed by a vote of 8:1.

Finally, it is useful to contrast this "injury but no damage" situation of the expulsion case with cases where the two concepts are connected to each other by legal doctrine. For example, sometimes the Law imposes on the defendant, not a mere obligation to use reasonable care, but an obligation to achieve a particular state of affairs, for example an improvement in the plaintiff's state.⁵⁰ Here, even if the improvement was impossible, the plaintiff can in Law complain about the state in which he persists. The very notion of "injury" itself is now dependent, not on a deterioration of the plaintiff's position from his starting position, but upon and derivative of the plaintiff's legal entitlement to improvement. In other words, in such cases not only is the notion of "damage" to X's normal expectancies dependent upon and derivative of his legal entitlement, so too is the very notion of "injury." In such cases proof of breach (of the obligation-to-achieve-a-result) will, without more, establish: that the breach was involved in the persistence of X's position; that this state constituted an "injury"; and that this state constituted "damage" to X's normal expectancies.

48. The Law needs a sophisticated notion of normal expectancies to deal appropriately with overdetermined outcomes. Stapleton, *Cause-in-Fact*, *supra* note 35, at 413.

49. *Id.*

50. . There may also be such strict obligations to achieve a result which is maintenance of a state of affairs (i.e., a strict promise that a surgical operation will not damage the patient's sight) or which is less than the plaintiff's starting position (i.e., a strict promise that a surgical operation will result in no more than a 5% loss of sight).

For example, suppose on Sunday a farmer sells peas to a retailer for the current wholesale price of \$100 a bushel, stating that they will be delivered on the following Tuesday. Since on that Sunday the current retail price is \$150, the retailer thinks he has a good bargain. Though the farmer exercises all reasonable care, the delivery of the peas on Tuesday turns out to be impossible (because of the carelessness of a third party) and they are not delivered until the following Friday. On the Tuesday the retail price of peas has fallen to \$130 per bushel and by the Friday when the retailer sells the load of peas delivered by the farmer it has fallen to \$100. Under the law of contract the retailer can recover compensation for any loss that was "caused" to him by any breach of contract by the farmer. To see whether our retailer can recover such compensation, the court would need to decide what sort of performance from the farmer the retailer was entitled to under the contract.

If the farmer's statement is determined by the court to be merely a promise that care will be taken to deliver on time, an allegation of breach of contract will fail because the farmer took care; and the retailer has not only suffered no deterioration from his starting position but also no "damage" to his normal expectancies as mandated by the Law. If, however, the statement is held to be a contractual promise as to result (namely, that the peas would be delivered on Tuesday), there is a breach of contract constituted by the farmer's failure to deliver the peas on the Tuesday. Now, the retailer's claim that he has been "injured" is based entirely on his legal entitlement; establishing breach of such an obligation-to-achieve-a-result is equivalent to establishing that the breach was involved in the pea-less state of the retailer; and that this state constituted "damage" to the retailer's normal expectancies which is where the retailer would have been had the peas been delivered on Tuesday. From the farmer the retailer can recover the quantum of this loss which is \$130 (what he would have recouped had there been the mandated performance)-\$100 (what he actually recouped) = \$30. Lawyers would express this as the farmer's contractual breach having "caused" the retailer to suffer a \$30 loss.⁵¹

II. OTHER THEORETICAL ACCOUNTS OF "CAUSATION IN THE LAW"

Having sketched the case for the Law to choose involvement as the sole interrogation underlying causal language in the Law, in this Section I set out other theoretical accounts of causation in the Law. These are inferior for a variety of reasons. For example, the approach of early U.S. Realists such as Leon Green could not satisfactorily identify duplicate involvement. The linguistic analysis of Hart and Honoré confusingly conflated the objective issue of involvement with the normative "proximate cause"/"scope" issue of whether a factor's involvement in the specified outcome was sufficiently relevant to the purpose of the enquiry for legal consequences to flow. The

51. . *But see infra* note 130.

approach of Michael Moore, a corrective justice theorist, refuses to accept omissions as causes. Lawyer-economists are more sensitive to the fact that the Law seeks information about the connections between the world as it is and a hypothetical world, and that causal language can denote whatever we choose it to. Yet one of the most eminent lawyer-economists, Guido Calabresi, chooses an interrogation underlying causal usage in the Law that does not accommodate as a “cause” the involvement of a factor in a coincidental consequence.

A. Early U.S. Realists: A ‘Minimal’ Factual Concept

The development of significant modern accounts of “causation in the Law” begins with the American Realists, especially Leon Green.⁵² From the 1920s, American Realists argued that many legal rules and concepts were “over-general and outworn abstractions.”⁵³ Such concepts were “rationally indeterminate” because they were subject to “equally legitimate, but conflicting, canons of interpretation”⁵⁴ and as such they could not justify a unique decision by an ultimate court of appeal which was not bound by precedent. Moreover, they often obscured the true reasons for appellate judgment⁵⁵ which were primarily stimulated by the facts of the case and non-legal considerations rather than by legal rules and concepts. Realists argued that legal analysis should be refashioned to expose the judges’ real reasons for decision.

Green showed that the ambiguous use of causal terminology was one technique by which such obfuscation was greatly facilitated: in cases where the defendant’s wrongdoing was clearly involved in producing the plaintiff’s injury, courts were rejecting plaintiffs’ claims by merely asserting that the wrongdoing was not a “proximate cause” of the injury or that the “chain of causation” had been broken or that the injury was not a “natural consequence” of the wrongdoing. In other words, causal terminology was used by courts not only in relation to the involvement enquiry but also to communicate findings about the normative “proximate cause”/“scope” issue. For Realists such as Green these “proximate causation” devices were “word magic whereby unprincipled limitation-of-liability decisions could be achieved at will or whim by untrammelled judges.”⁵⁶ The deployment of causal language

52. LEON GREEN, *THE RATIONALE OF PROXIMATE CAUSE* (1927); David W. Robertson, *The Legal Philosophy of Leon Green*, 56 TEX. L. REV. 393 (1978).

53. Herman Oliphant, *A Return to Stare Decisis*, 14 A.B.A. J. 71, 75 (1928).

54. Brian Leiter, *American Legal Realism*, in *THE BLACKWELL GUIDE TO THE PHILOSOPHY OF LAW AND LEGAL THEORY* 50, 57, 64 (Martin P. Golding & William A. Edmundson eds., 2005).

55. Brian Leiter, *Positivism, Formalism, Realism*, 99 COLUM. L. REV. 1138, 1147-49 (1999).

56. David W. Robertson, *Allocating Authority Among Institutional Decision Makers in Louisiana State-Court Negligence and Strict Liability Cases*, 57 LA. L. REV. 1079, 1114 (1997).

here falsely suggested some scientific rationale for these normative decisions and obscured their real basis: namely, the determination that the relevant consequence of the wrongdoing fell outside the scope of liability which was judged appropriate for the particular legal rule in the light of its purpose.

Green argued in favour of separating out the factual enquiry of involvement from normative considerations. The potential strength of Green's approach was that by stripping out such considerations and locating them elsewhere in the legal analysis of the case, they could be identified and evaluated for their normative soundness. Indeed, so attractive was this idea of separating out the factual enquiry that it is now the orthodox position in the US private law.⁵⁷

But there were difficulties in Green's theory. First, in his later writings⁵⁸ Green argued that the "causation enquiry" should precede the analytical filters of duty (into which he folded case law on "proximate cause") and breach. This arrangement in turn necessitated that the subject of that "gateway" enquiry into causation should be the defendant's conduct as a whole and not its "tortious aspect." This odd analytical arrangement proved too awkward in application to be persuasive. For example, in theory it would inefficiently require the causal analysis to be applied to the vast number of omissions that may have been involved but were legally of no concern because they were lawful and not breaches of a recognized legal duty.

Secondly, Green's approach was fatally incomplete in important respects. For example, Green was unable to identify a coherent test for involvement. He rejected *sine qua non* as an adequate test because, *inter alia*, it failed to identify duplicate involvement leading to an overdetermined outcome such as the conduct of each hunter in the earlier example.⁵⁹ However, Green⁶⁰ and contemporaries such as Becht and Miller⁶¹ were unable to formulate an algorithm for involvement that adequately encompassed duplicate involvement and were forced to resort to the very sort of obfuscatory slogans that Realists generally deplored: that a factor qualified as a "factual cause" if it was a "substantial factor" in bringing about the outcome. Even later scholars who were broadly admiring of Green astutely confined the role of the substantial factor device to that of an adjunct to the but-for test, where resort to that adjunct was only to be tolerated in overdetermined outcome cases.⁶²

57. Dan B. Dobbs, *THE LAW OF TORTS* 409 (2000).

58. Leon Green, *Identification of Issues in Negligence Cases*, 26 SW. L.J. 811 (1972); Leon Green, *The Causal Relation Issue in Negligence Law*, 60 MICH. L. REV. 543, 546 (1962) [hereinafter Green, *Causal Relation Issue*].

59. Leon Green, *Are There Dependable Rules of Causation?*, 77 U. PA. L. REV. 601, 604-05 (1929).

60. GREEN, *supra* note 52, at 137.

61. BECHT & MILLER, *supra* note 47.

62. *E.g.*, David W. Robertson, *The Common Sense of Cause in Fact*, 75 TEX. L. REV. 1765, 1776-78 (1997).

Thirdly, even though most US courts and commentators followed Green and cleanly distinguished the involvement issue (described as “factual causation”) from the normative “proximate cause”/“scope” issue, the latter did not shed its “causal” terminology, typically being described, at least until recently, as the “proximate cause” issue. Most modern courts acknowledge that the issue has nothing to do either with factual cause or proximity.⁶³ The risk that this odd legal usage would mislead juries and others has generated concern,⁶⁴ prompting the American Law Institute to reformulate the terminology on the issue in the non-causal language of the “scope of liability for consequences of breach,”⁶⁵ banishing the term “proximate cause” and confining all causal terminology to the analytically prior issue of involvement which is termed “factual causation.” A law reform body in Australia⁶⁶ recommended the same bifurcation of issues in private law into “factual causation” and “scope of liability”; this has now been adopted in legislation in all Australian jurisdictions.

Finally, Green often gave the impression that outside the factual cause area the courts were faced with an amorphous mass of normative concerns which had not been, and perhaps could not be, structured. This exaggerated “skepticism as to the possibility of framing rules”⁶⁷ relating to the attributions of responsibility for consequences provoked a landmark work by Hart and Honoré.

B. Linguistic Analysis

In 1959, Herbert Hart and Tony Honoré published a major study of “causation in the Law” using the then fashionable tools of linguistic analysis.⁶⁸ Hart and Honoré asserted that “it is the plain man’s notions of causation (and not the philosopher’s or scientist’s) with which the law is concerned”⁶⁹ and should be concerned.⁷⁰ They believed that these non-legal

63. David W. Robertson, *The Vocabulary of Negligence Law: Continuing Causation Confusion*, 58 LA. L. REV. 1, 10 (1997).

64. See, e.g., sources cited *supra* note 35.

65. Restatement (Third) of Torts: Liab. for Physical Harm 574-75 (Proposed Final Draft, April 6, 2005).

66. DAVID ANDREW IPP ET AL., REVIEW OF THE LAW OF NEGLIGENCE: FINAL REPORT 109 (Commonwealth of Australia, 2002) (drawing on Stapleton, *Cause-in-Fact*, *supra* note 35).

67. HART & HONORÉ, *supra* note 21, at 92.

68. HART & HONORÉ, *supra* note 21.

69. *Id.* at 1.

70. This followed from their embrace of “the principle, inherent in the rule of law, that legal responsibility *should* depend on criteria which ordinary people can apply, even if they cannot explain the principles on which they do so.” A.M. Honoré, *Herbert Lionel Adolphus Hart 1907-1992*, 84 PROC. OF THE BRIT. ACAD. 295, 304 (1994) (emphasis added). Note also that in his most influential book, Hart gave a positivist account of law as a human artifact the content of which is a socially contin-

"common-sense" notions of causation "have very deep roots in all our thinking and in common ideas of when it is just or fair to punish or exact compensation."⁷¹ In other words, what Hart and Honoré meant by "the concept of causation in Law" seems to be merely an artifact derived from how lawyers used causal words, which they asserted was the same way that ordinary people used them. Theirs was not a metaphysical account.⁷²

They examined how causal language was used in the two traditional analytical steps of "cause" and "proximate cause"/"remoteness" (now "scope") and found four distinct notions. One was the idea of a "causally relevant condition"⁷³ which is roughly⁷⁴ equivalent to the relation I have called "involvement." For this notion⁷⁵ Hart and Honoré provided an elegant and largely successful algorithm which later became known as the "NESS" test, discussed below.⁷⁶

The second notion emerged, according to Hart and Honoré, in explanatory enquiries where they noted that ordinary language did not characterize every causally relevant (involved) factor as a "cause" of a contingency "the occurrence of which is puzzling because it is a departure from the normal, ordinary or reasonably expected course of events."⁷⁷ According to Hart and Honoré, in explanatory enquiries the term "a cause" is reserved for a factor that is an abnormal feature of the situation or a free deliberate human action:

gent fact: he did not ask what it was the *ordinary person* meant when he or she used the word "law." H.L.A. HART, *THE CONCEPT OF LAW* (Oxford University Press 1961).

71. HART & HONORÉ, *supra* note 21, at 1.

72. See Peter Lipton, *Causation Outside the Law*, in JURISPRUDENCE: CAMBRIDGE ESSAYS 127, 130 (Hyman Gross & Ross Harrison eds., 1992). On the philosophical difficulties created by Hart and Honoré's problematic appeal to literal versus figurative language, see Roger Hancock, *Books Reviewed*, 6 NAT. L.F. 143 (1961) (reviewing HART & HONORÉ, *supra* note 21). Hancock notes "[t]o show what are ordinarily considered adequate or sufficient grounds for saying 'A caused B' is one thing; to show what is meant by causality is a different thing. . . . [T]he authors seem not to have explained the meaning of causality." *Id.* at 150.

73. HART & HONORÉ, *supra* note 21, at 107.

74. One difference is that, since my view is that the Law can choose the interrogation underlying causal usage in the Law, it can choose one in which the identification of involvement depends on disaggregating other involved factors. See *infra* text accompanying note 148.

75. And perhaps building on earlier work by Ayer who stated: "the event by which a given event *e* is determined is always to be understood . . . as comprising the whole set of conditions of which it is true that they are jointly sufficient for the occurrence of *e*, and that no sub-set of them is also sufficient." ALFRED J. AYER, *THE FOUNDATIONS OF EMPIRICAL KNOWLEDGE* 181 (1951).

76. See HART & HONORÉ, *supra* note 21, at 104-08, 116-19, 216-29.

77. *Id.* at 31.

an intervention on a “stage” already set.⁷⁸ Thus Hart and Honoré noted, for example, that an omission to take a normal precaution could be a cause.⁷⁹

As Foot points out, the objection to Hart and Honoré’s treatment of explanatory enquiries is that their proposition, that a factor which explains a “departure from [the] normal . . . course of events” is an “abnormal” feature, suffers from circularity: “the form of the question determines the form of the answer.”⁸⁰ Moreover, in the context of many legal enquiries the Law is concerned with departures not from normality, but from the mandated course of events. As we saw earlier, the Law identifies what was mandated before it investigates whether the defendant’s alleged departure from it was a “cause” of the outcome. Departures from the mandated course of events may be normal practice among those in the position of the defendant and yet adherence to such “normal practice” can attract liability when it results in harm.⁸¹ Courts need and typically do describe such a breach of obligation as a cause of the harm.⁸²

According to Hart and Honoré a third notion, that of “causal connection,” could be identified from an analysis of how language was used in attributive enquiries such as the “proximate cause”/“scope” stage of legal analysis. Hart and Honoré asserted that even if a factor was “causally relevant” and a “cause” in an explanatory sense (i.e., an abnormal feature of the situation or a free deliberate human action) more was needed before a legally-adequate form of “causal connection” could be established between the factor and the specified outcome. In other words, Hart and Honoré believed they were able to expose “a group of causal notions embedded in common sense,”⁸³ which influenced when legal responsibility was truncated, thereby refuting the assertion by Leon Green that “proximate cause”/“scope” was an area that could not be expressed in clear principles.

Hart and Honoré distilled these notions of causal connection⁸⁴ from observations of how courts respond to interventions occurring after the defen-

78. H.L.A. Hart and A.M. Honoré, *Causation in the Law* 72 (2d ed. 1985).

79. HART & HONORÉ, *supra* note 21, at 35.

80. Philippa Foot, *Hart and Honoré: Causation in the Law*, 72 PHIL. REV. 505, 507 (1963). Philosophical objections were also raised against the notion that to be an explanatory “cause” a human intervention must take the form of a *voluntary* action. See *id.* at 514; P. Nowell-Smith, *Critical Notice: Causation in the Law*, 70 MIND 553, 557 (1961). See also Thomson’s objection that “it is very plausible to think that the plain man’s thought about causation is drenched in normativity” in Thomson, *supra* note 3.

81. See, e.g., *Lloyds Bank Ltd. v. E. B. Savory & Co.*, [1933] A.C. 232, 235.

82. See, e.g., *Thompson v. Smiths Shiprepairers (North Shields) Ltd.*, [1984] 1 Q.B. 405.

83. HART & HONORÉ, *supra* note 21, at 123.

84. They characterized these notions as causal and factual, HART & HONORÉ, *supra* note 78, at lii, 91, apparently in the mistaken belief that not to do so would remove the issue from the fact-finder, at that stage the jury. David Howarth, *O Mad-*

dant's breach and before the injury to the plaintiff. The first and "central" notion of causal connection is in operation, say Hart and Honoré, where courts cite intervening "voluntary action [by another] or abnormal and coincidental events as negating causal connection."⁸⁵ For example, suppose that while speeding a motorist loses control, hits a pedestrian and breaks her leg. On the way to hospital the ambulance carrying the pedestrian is struck by lightning and she is killed. It is virtually certain that the driver will not be held legally responsible for the death. Under the terminology used by US lawyers at the time Hart and Honoré were writing, the plaintiff would have been unable to establish that the breach was the "proximate cause" of the death. According to Hart and Honoré, "causal connection in the ordinary [central] sense" was negated by the lightning.⁸⁶

But sometimes a careless party *is* held liable for injuries resulting from the intervention of, say, lightning or voluntary human conduct. These cases led Hart and Honoré to identify a second form of causal connection that was not severed by the intervention: namely that of "occasioning harm," for example "by providing opportunities" for such an intervention.⁸⁷ Finally, Hart and Honoré were confronted with cases where the defendant was held liable for inducing an intervention by another. An example of this is where a fraudster induced the plaintiff to enter a transaction which resulted in loss to the plaintiff and the fraudster was held responsible for that loss. Hart and Honoré responded to such cases by identifying a third form of causal connection that was not severed by the other changing his position in response to the defendant: namely, that of "providing reasons" for the other to change his position.

Truncation of legal responsibility by these notions of causal connection had, Hart and Honoré argued, been unhelpfully amalgamated, under the common term of "proximate cause" or "remoteness," with a fourth distinct set of ideas: "non-causal" limitations on the appropriate scope of liability. An example of this fourth type of concern was when liability for a consequence of the defendant's wrongdoing was excluded on the basis of "the optimum allocation of social risks . . . [and] the impact in a given case of the equities as between the parties."⁸⁸

The approach of Hart and Honoré is inferior to the involvement approach for a number of reasons. First, as we have seen, their approach has difficulty accommodating the fact that the Law needs to and does identify normal departures from a mandated standard as "causes."

ness of Discourse, that Cause Sets up with and Against Itself, 96 YALE L.J. 1389, 1413-14 (1967).

85. HART & HONORÉ, *supra* note 21, at 123.

86. HART & HONORÉ, *supra* note 78, at xlv.

87. *Id.* at 59 and 194-95.

88. *Id.* at xxxvi. An excellent example of this is the so-called "New York City fire rule" under which, if a defendant in breach of duty starts a fire which spreads along a terrace of buildings, damages may only be recovered in respect of the first building affected. *Id.* at 89.

Secondly, Hart and Honoré neglected the critical role played by the formulation of the alleged breach in the attributive “proximate cause”/“scope” enquiry. For example, while the law of negligence refuses to impose legal responsibility for the lightning injuries in the ambulance example, liability has been imposed where defendants carelessly “allowed inflammable vapour to remain in the bottom of a barge . . . [and it] was ignited by a flash of lightning.”⁸⁹ Exactly the same type of intervention has occurred but liability is sometimes imposed and sometimes not. The approach of Hart and Honoré obscures the fact that the differential lies in the relation of the breach to the consequence, see below.

Similarly, the nature of the breach of obligation, neglected by Hart and Honoré, provides a more coherent explanation of why in some cases but not others the Law refuses to impose legal responsibility on a defendant when the voluntary act of another person has intervened. An example of that contrast is where liability was not imposed in a case where *D* carelessly spilt gasoline in a service station and a madman flicked a match into it precipitating a conflagration, but was imposed in a case where the defendant carelessly allowed prisoners to escape from custody and the prisoners damaged the yachts they stole to use in their escape.

A third difficulty with Hart and Honoré’s linguistic analysis methodology is, ironically, that there is virtually⁹⁰ nothing in the language of the courts to support their contention that the Law distinguishes cases such as the lightning cases on the basis of the Law’s notion of *causation*, let alone that the Law explicitly imposed different “*causal connection*” requirements in the two cases. Hart and Honoré’s linguistic “analysis” was not based on a rigorous empirical survey, let alone such a survey across the full range of legal materials:⁹¹ patterns of usage were merely asserted and illustrated. Yet counter-examples abound. For example, while Hart and Honoré assert that in cases of “occasioning harm” the defendant has not “caused” the harm,⁹² Lord Reid pointedly noted in the yacht case:

[I]t has never been the law that the intervention of human action always prevents the ultimate damage from being regarded as hav-

89. HART & HONORÉ, *supra* note 21, at 184.

90. The most prominent (and eminent) exception is Lord Hoffmann (United Kingdom House of Lords), who is a former student of Tony Honoré.

91. Jane Stapleton, *Unpacking Causation*, in RELATING TO RESPONSIBILITY: ESSAYS IN HONOUR OF TONY HONORÉ ON HIS 80TH BIRTHDAY 145, 148-55 (Peter Cane & John Gardner eds., 2001).

92. HART & HONORÉ, *supra* note 78, at xlv (“[T]he defendant need not be shown to have caused the harm complained of; it is sufficient that by his conduct he ‘occasioned’ it.”); *id.* at 350-51 (“[I]n criminal law . . . it is not normally enough merely to prove that [the] accused occasioned the harm; he must have ‘caused’ it in the strict sense.”). *But see id.* at 59 (“causing harm . . . by providing opportunities for an intervention by another”).

ing been *caused* by the original carelessness. . . . [E]very day there are many cases where, although one of the connecting links is deliberate human action, the law has no difficulty in holding that the defendant's conduct *caused* the plaintiff loss.⁹³

A fourth and core problem with Hart and Honoré's approach is that it fails to segregate clearly contexts in which causal language was used by courts merely to communicate involvement under the "causation" element of a cause of action and contexts where a denial of "proximate cause"/"scope" was used to communicate a refusal to impose responsibility for the outcome with which the breach of obligation was clearly involved. Courts had long recognized these as two distinct enquiries.⁹⁴ Green appreciated the normative nature of the "proximate cause"/"scope" step but despaired of finding in case law the principles on which this truncation of legal responsibility was done. Hart and Honoré did see some patterns in case law concerning that step but were unwilling to declare that those patterns always tracked normative considerations. Thus even when Hart and Honoré *did* identify a factual feature, such as the intervention of lightning, often present when courts refuse to impose liability for want of "proximate causation," they failed to explore the *normative* basis for these truncations of responsibility (on which see below), preferring merely to label them "causal" and "eminently suitable for submission to a properly instructed jury."⁹⁵

Yet distilling normative principles from the "proximate cause"/"scope" case law can be done and, in the interests of legal clarity, should be done. For example, the damage by lightning in the ambulance case is a coincidental consequence of the speeding⁹⁶: in other words, speeding does not generally increase the probability of lightning injuries. The Law may well judge it inappropriate (because it is unfair or because it does not directly deter the conduct of concern to the Law, namely inadvertent speeding) to impose liability for the coincidental consequences of a breach of obligation. In contrast, damage due to the fumes ignited by lightning is not coincidental. This provides a coherent normative rationale for the divergent results in the cases and one on which a lawyer would be able to advise clients as to future conduct. Yet, regrettably, this rationale is masked by Hart and Honoré's preferred ex-

93. *Home Office v. Dorset Yacht Co.*, [1970] A.C. 1004, 1027-28 (emphasis added). Though this case is mentioned in the second edition of *CAUSATION IN THE LAW*, this significant dictum is not. HART & HONORÉ, *supra* note 78, at 198. For a more recent example, see *W 1-6 v. Essex County Council and Another* [2000] U.K.H.L. 17.

94. Glanville Williams, *Causation in the Law*, 1961 CAMBRIDGE L.J. 62.

95. HART & HONORÉ, *supra* note 21, at 275.

96. A coincidental consequence of an involved factor is a consequence the risk of which is *not generally* increased by the existence of a factor of that type. For example: D carelessly speeds along a road and this happens to bring the vehicle to a position where a tree falls on the vehicle injuring a passenger.

planation: that in the ambulance case the tort of negligence requires, *for some unstated reason*, that the plaintiff prove that the breach satisfied the central “causal connection” to the injury (which it does not because lightning intervened) but that, *again for some unstated reason*, the tort of negligence does not require the plaintiff in the fumes case to prove that central type of “causal connection.” Predictably, this obscuring “word magic” attracted strong criticism from US Realists such as Leon Green.⁹⁷ Its dangers for clarity in legal reasoning are clear.⁹⁸

A fifth problem in Hart and Honoré’s account of causation in the Law is that it rests on a “snapshot” of causal usage frozen in the late 1950s. Their assertion that “ordinary language”/“common sense” causal principles are “facts”⁹⁹ does not adequately accommodate the late-Wittgensteinian insight that meaning cannot be divorced from the activities of the language users. Yet the “language-games” of lawyers are clearly embedded in a social practice that is in constant flux.¹⁰⁰ Legislators (whose modern regulatory enactments Hart and Honoré by and large ignore) and courts change the pattern of legal obligations over time and such normative developments affect the sorts of conduct that may be prohibited or mandated. As we have seen, this breach issue in turn affects the involvement issue (because it changes the content of the hypothetical no-breach world to which the actual world is compared) and thereby causal usage. In short, the pattern of causal usage in the Law, even if it does reflect ordinary language usage and as such is a “social fact” at any one point of time,¹⁰¹ is contingent on the evolution of legal norms.

97. Green, *Causal Relation Issue*, *supra* note 58.

98. The “causal connection” artefact created by Hart and Honoré poses two significant dangers. First, it tempts a trial judge to base his preferred result in a case on the bald assertion that in the circumstances the Law demanded such and such a causal connection. Secondly, even if the trial judge does not want to do this, how is he to proceed if an appellate judge has, for unstated reasons, based his resolution of one case on the assertion that the Law requires the plaintiff to prove one type of “causal connection” and his resolution of another on the assertion that it requires proof of a different type of “causal connection,” especially when both cases fall under the same legal rule (such as the tort of negligence)? HART & HONORÉ, *supra* note 21, at 274. Even if it were coherent to express the Law as there being a particular “causal requirement for the purposes of the legal rule,” it is incoherent to then assert that, *within the same legal rule*, the Law may, for unstated reasons, require different causal requirements. Jane Stapleton, *Occam’s Razor Reveals an Orthodox Basis for Chester v. Afshar*, 122 L.Q.R. 426, 430-36 (2006) (U.K.). With common law rules such as the tort of negligence there is also the more fundamental issue that, there being no canonical text as there is in statutes, the purpose of the rule is controversial.

99. HART & HONORÉ, *supra* note 21, at 86.

100. Brian Bix, *Cautions and Caveats for the Application of Wittgenstein to Legal Theory*, in LAW AND SOCIAL JUSTICE 222-23 (Joseph Keim Campbell, Michael O’Rourke & David Shier eds., 2005).

101. William Lucy, *Philosophy of Private Law* (2007).

A good illustration is the greater willingness of modern courts and legislators to mandate affirmative action to prevent the intervention of a deliberate wrongdoer.¹⁰² Today the Law might mandate that a store provide lighting in its surroundings to deter criminal attacks on its customers. When a customer, attacked in the unlit grounds of the defendant store in 2008, succeeds in his action in the tort of negligence, there will be a legal finding that the omission of lighting by the store was a "cause" of the customer's injury. In 1900 the Law did not mandate such conduct so there would have been no such causal usage at that time.

Similarly, liability based on wrongfully providing reasons, long recognized in areas such as deceit, has also burgeoned with the recognition in 1963 that merely-negligent advice resulting in economic loss may be actionable. As Hart and Honoré predicted, the more defendants are held liable in circumstances such as these and the affirmative duty contexts, the less it is "helpful to describe the Law with reference to the common-sense notions expounded" in their book, based as they were on legal usage of causal terminology in the third quarter of the twentieth century.¹⁰³

C. *Corrective Justice*

Michael S. Moore believes that the "best goal for tort law"¹⁰⁴ is corrective justice which mandates that "legal liability tracks moral responsibility." But if in tort law "[c]ause" has to mean what we mean when we assign moral responsibility for some harm, and what we *mean* in morality is to *name* a causal relation that is natural and not of the law's creation,¹⁰⁵ then corrective justice "demands a robustly metaphysical interpretation" of "cause." In particular, corrective justice needs a metaphysical account of the sudden truncation of liability under the label of "proximate cause"/"scope" untainted by the influence of non-metaphysical considerations (consequentialist policy concerns).

Moore argued that the Hart and Honoré analysis of when we *name* relations as "causal" was incomplete¹⁰⁶ because it lacked such a firm pre-legal, "plausible, understandable, communicatable, metaphysical"¹⁰⁷ basis for its

102. The general modern proliferation of duties of affirmative action is of particular importance in the context of liability of government agencies, which typically have roles of control, protection and prevention.

103. HART & HONORÉ, *supra* note 21, at 180; *see also id.* at 172.

104. Michael S. Moore, *Causation and Responsibility*, 16 SOC. PHIL. & POL'Y 1, 4 (1999).

105. *Id.* at 4 (emphasis added).

106. Moore adopts Hart and Honoré's patterns of connection but he oddly asserts that where a person intercepts a warning telegram thereby aiding a murderer to kill the victim, the interceptor's liability is "non-causal." *Id.* at 22.

107. *Id.* at 2.

notion of causation.¹⁰⁸ Yet Moore adopts an odd strategy to find a pre-legal notion of cause: he constructs an account that inexplicably draws on alleged patterns of causal usage (in the Law no less!) which he seems to assume reflect moral concerns, and then claims this provides an avenue to a sound *metaphysical* account of causation. Here is that strategy.

Moore notes that the Law's usage of causal terms, particularly in the area of "proximate causation"/"scope", seems to presuppose that its concept of "causation" must meet certain requirements. Moore enquires "whether there is any metaphysical theory of causation that can endow causation with" such requirements.¹⁰⁹ By taking at face-value the usages of "cause" in liability doctrines, he deduces for example: that "the law's concept of cause presupposes that causation both tapers off over time and breaks off suddenly at certain points in time;"¹¹⁰ and that "increased culpability has been treated as a kind of aphrodisiac to causation, enhancing the latter's reach and power."¹¹¹

Moore then argues that a metaphysical account of the concept of causation presupposed by the Law can only be achieved if that concept is pruned. He claims that "[t]he law has mixed too many extraneous elements into what it calls 'causation' for there to be much hope for any metaphysical translation."¹¹² For this reason Moore argues that we need to ignore certain doctrines on the basis: that "they cannot be doctrines of cause-based liability, despite their self-labelling in these terms"¹¹³; and they make demands on the concept of causation which are "obviously impossible ones for any metaphysics to meet."¹¹⁴ One example of the Law making such a "mistake" is when it seems to demand that "causation be a relation affected by the degree of culpability with which the act (that is the putative cause) was done."¹¹⁵ Moore argues that "there is no metaphysical account of causation that could meet this demand" and that "[c]ausation cannot be a real relationship in the world and [at the same time] be influenced by . . . culpability."¹¹⁶ Another example is the treatment of the intervention by voluntary human conduct under the rubric of "proximate cause"/"scope" about which Moore concludes that "it is hard to see how metaphysics can explain these legal discriminations."¹¹⁷

A central flaw in Moore's approach is that he does not clearly explain, let alone justify, the criteria by which he chooses to prune "the concept of

108. Michael S. Moore, *The Metaphysics of Causal Intervention*, 88 CAL. L. REV. 827, 854-55 (2000).

109. Moore, *supra* note 104, at 45.

110. *Id.* at 9.

111. *Id.* at 27.

112. *Id.* at 28.

113. *Id.* at 6.

114. *Id.* at 28.

115. *Id.*

116. *Id.* at 35.

117. Moore, *supra* note 108, at 877; see also Heidi M. Hurd & Michael S. Moore, *Negligence in the Air*, 3 THEORETICAL INQUIRIES L. 333, 405 (2002).

causation pre-supposed by the law," and he does not confront the problem that, once he has effected such a selective pruning, it is not clear what the nature of his project has become. Moore himself dismisses ordinary language philosophy because "[i]t allows the nature of the thing, causation, to be fixed by the conventions of present usage"¹¹⁸ and accepts that "[t]he nature of causation – 'what causation is' – is a matter of fact, inviting theoretical speculation."¹¹⁹ He then presents what he claims is a "plausible" metaphysical theory of causation having made two major but inexplicable normative moves. First, he now¹²⁰ relies on intuition to make the normative choice of not allowing an omission to qualify as a cause: since we draw a moral "distinction between our responsibility for making the world worse and our responsibility for making it better . . . [t]he easiest, most *intuitive* way to draw this distinction is by using causation to mark the difference."¹²¹ Moreover, he asserts that, where there is liability for negligent provision of an opportunity for another to do harm, "the liability is not *cause*-based liability . . . [because] these are cases of true omission liability."¹²²

Secondly, a central claim within the metaphysical theory of causation that Moore provides is that: causal relations peter out gradually by transmission through events. "This is because causation is a scalar relation (a more-or-less affair) and because the degree of causal contribution by some act to some harm becomes less and less as successively larger groups of other events join the act in causing the harm."¹²³ On this view he claims that at least one limit on liability imposed under the label of "proximate cause" ("scope"), spatio-temporal proximity, can be rationalized as a "good proxy for this progressive diminishment in causal contribution."¹²⁴ But Moore had deduced the scalar nature of his "prelegal" metaphysics of causation from

118. Moore, *supra* note 108, at 857.

119. *Id.* at 855.

120. This may contrast with Moore's earlier statement that "if [a captured] terrorist knows the location of hidden bombs . . . he has culpably *caused* the situation where someone must get hurt." Michael S. Moore, *Torture and the Balance of Evils*, 23 ISRAEL L. REV. 280, 323 (1989) (emphasis added). It is not clear from this passage if Moore meant it to apply to a prisoner who had no involvement in the placement of the bombs but merely knew their location through his membership in the terrorist organization. Moore's ambiguity was exploited in the notorious Bybee Memo, to support the Memo's argument that torture ("methods that might violate" the Convention Against Torture and Other Cruel, Inhuman and Degrading Treatment or Punishment as implemented by Sections 2340-2340A of title 18 of the United States Code) of such a prisoner was justified. See Memorandum from Jay S. Bybee, Assistant Attorney General, to Alberto R. Gonzales, Counsel to the President 44 (Aug. 1, 2002), available at <http://www.washingtonpost.com/wp-srv/nation/documents/dojinterrogationmemo20020801.pdf>.

121. Moore, *supra* note 104, at 32 (emphasis added).

122. *Id.* at 36 (emphasis added).

123. Hurd & Moore, *supra* note 117, at 410.

124. *Id.*

patterns of causal usage in legal materials:¹²⁵ why was not it pruned along with the “erroneous” idea held by courts and legislatures that omissions can have causal status?

The incoherence of Moore’s approach results from his apparent embrace of a physicalist approach¹²⁶ that sees causation as “a real relationship in the world”; in combination with a respect, albeit selective, for linguistic usage, specifically that with a scalar aspect; plus an associated failure to acknowledge and deconstruct the atypical nature of the usage of causal terms in the criminal law. As Stephen J. Morse notes, it is metaphysically implausible that, within “the universe’s ontology of physical cause and effect . . . there are ‘sharp breaks’ in the ‘causal chains’ of the universe that would provide a moral rationale for the same sharp breaks in [proximate cause] doctrine that Michael accurately identifies.”¹²⁷ Rather, “[t]he best understanding . . . is that causation is a seamless web. . . . [T]here are no gaps or sharp breaks in causation. . . . [C]ausation just keeps rolling along.”¹²⁸ In any case, the dominant view of modern lawyers is that the “proximate cause” terminology of the past was highly misleading and masked complex normative judgments about the appropriate scope of legal responsibility for consequences of conduct,¹²⁹ and that these judgments (unlike the metaphysical reality of the world) change over time and between jurisdictions for a variety of reasons. To the extent that something seems to be cut off or peter out under this legal label it is legal responsibility.

D. Lawyer-Economists: Marginalized Causation

In the last four decades a particularly influential account of the Law has been that of the legal economists who have reconceptualized the Law from the perspective of the efficient allocation of resources and maximizing or minimizing certain behaviors. The building blocks of the approach are as follows. Assume the Law seeks to support the most efficient allocation of resources, namely that entitlements are in the hands of those who value them the most (judged by capacity and willingness to pay). In an environment of zero transaction costs, that state of optimal efficiency will result whatever the

125. Moore, *supra* note 108, at 828.

126. *Id.* at 877.

127. Stephen J. Morse, *The Moral Metaphysics of Causation and Results*, 88 CAL. L. REV. 879, 880 (2000).

128. *Id.* at 889. For additional astute philosophical criticism of Moore’s approach, see Richard Fumerton, *Moore, Causation, Counterfactuals, and Responsibility*, 40 SAN DIEGO L. REV. 1273 (2003).

129. For example, suppose that D carelessly breaks P’s leg and when P is being treated at hospital a doctor, X, treats the leg badly so that it must be amputated. Whether D’s carelessness is judged a “proximate cause” of the amputation depends on what Moore himself characterizes as a non-causal factor: the degree of culpability of X.

distribution of initial legal entitlements, because interested parties will bargain around those entitlements; this is the Coase Theorem.¹³⁰ Where, however, there are significant transaction costs, as is usually the case, the initial legal allocation of rights becomes crucial to securing this state of optimal efficiency; so the lawyer-economist's normative agenda is to allocate initial legal rights to those who value them the most.

For example, the interaction of hunters and walkers involves a risk of personal injuries to the walker. Hunters and walkers both value their activity. Were they able to transact we might find that the most efficient state of affairs is for both to continue but for the hunters to take care where they shoot (because the walkers would be willing to pay a large enough "bribe" for the hunters to do so). The reality of transaction costs that prevent this bargaining then justifies a liability law that gives the mountain walker an entitlement not to be injured by the carelessness of the hunter because this would give hunters the appropriate, "efficient" incentive to take care. Conversely we might find that the efficient state of affairs is one where hunters need take no care of walkers, in which case the lawyer-economist would not support liability on the hunter, thus leaving the walker with an incentive to avoid the risk associated with his interaction with the hunter. In short, for the lawyer-economist liability is a mere instrumental device to generate incentives for future conduct.

In the economic account, past injuries are "sunk costs" and how they came to occur is of no direct interest. In any case, when a hunting accident occurs the activity of the hunter and the activity of the walker are both involved factors so, for the lawyer-economist, "causality is reciprocal"; and it is a crude nonsense to talk about internalizing social costs to the activity that "causes" them.¹³¹ Thus Landes and Posner assert that "causation in the law is an inarticulate groping for economically sound solutions . . ."¹³² and argue:

If the basic purpose of tort law is to promote economic efficiency, a defendant's conduct will be deemed the cause of an injury when making him liable for the consequences of the injury would promote an efficient allocation of resources to safety and care; and when it would not promote efficiency for the defendant to behave

130. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960). Note also the counter-intuitive insight that failure to extract a bribe is itself a cost. See *id.* at 7.

131. See *id.* at 28-42; Guido Calabresi, *Some Thoughts on Risk Distribution in Torts*, 70 YALE L.J. 499, 532-33 (1961).

132. William M. Landes & Richard A. Posner, *Causation in Tort Law: An Economic Approach*, 12 J. LEGAL STUD. 109, 131 (1983). Once elevated to the bench, Posner was more cautious about the value of economic theory to the practice of law. See, e.g., *McCarty v. Pheasant Run, Inc.*, 826 F.2d 1554, 1557 (7th Cir. 1987).

differently, then the cause of the accident will be ascribed to an 'act of God' or some other force on which liability cannot rest.¹³³

In Calabresi's terminology, only if the defendant would be the "cheapest cost avoider" of such injuries in the future, should he be identified by the Law as a "cause" of the past injury.¹³⁴

The fact that efficiency theories of Law cannot adequately explain or justify the causation requirement in legal doctrine is widely regarded as a serious flaw in the approach.¹³⁵ Moreover, the view that "causation in the Law" is and should be a mere instrumental label leads Calabresi to a major departure in causal theory. Where a speeding motorist breaks the leg of a pedestrian who is then killed when his ambulance is struck by lightning, the death is a coincidental consequence of the speeding: speeding does not generally increase the probability of lightning injuries. By definition, where an activity does not generally increase the probability of an outcome, there is no way in which an actor can alter the way he engages in that activity to prevent the outcome. It is, therefore understandable why, on efficiency grounds, Calabresi argues against liability in such circumstances. To prevent liability being imposed in such circumstances Calabresi invents a "causal" requirement of "causal linkage": "[t]here is a causal link between an act or activity and an injury when we conclude on the basis of the available evidence that the recurrence of that act or activity will increase the chances that the injury will also occur."¹³⁶ Since speeding does not increase the chance of lightning strikes, there is no causal link between the speeding of the motorist and the pedestrian's death.

In terms of this Essay, what Calabresi in effect asserts is that the investigation underlying causal usage in the Law should be an interrogation that identifies as a "cause" only a factor that is involved in the existence of the particular phenomenon of interest *and* only where that phenomenon is a non-coincidental consequence of that factor.

Couching a "no-liability-for-coincidence" rule in terms of there being a requirement of "causal linkage" is, however, triply inconvenient for the Law. It obscures Calabresi's normative reason for no-liability in the ambulance case: that liability for coincidental consequences of careless conduct such as inadvertent speeding cannot directly deter the conduct of concern to the Law, namely speeding. Moreover, it would be as problematic as the approach of Hart and Honoré in cases where the Law *does* seek to impose liability for coincidental consequences. For example, in a case of wrongdoing that requires intention, such as deceit, there is a sound reason *for* imposition of lia-

133. Landes & Posner, *supra* note 132, at 110.

134. Guido Calabresi, *Concerning Cause and the Law of Torts: An Essay for Harry Kalven, Jr.*, 43 U. CHI. L. REV. 69 (1975).

135. Mark A. Geistfeld, *The Doctrinal Unity of Alternative Liability and Market-Share Liability*, 155 U. PA. L. REV. 447, 449 (2006).

136. Calabresi, *supra* note 134, at 71.

bility for coincidences. This is an efficiency reason with which Calabresi should be highly sympathetic, namely that such liability can have "second order" deterrent effects by encouraging these necessarily advertent actors to review downwards their future activity level in engaging in such wrongful conduct.¹³⁷ Finally, since it suggests that the focus of an efficiency analysis should be on "ex ante probabilistic linkage (increased risk) analysis,"¹³⁸ it fails to account for the fact that liability is typically limited to contexts in which some form of injury has been suffered.

E. The New Realism

Though Hart and Honoré's linguistic approach proved inconvenient for lawyers, they provided a major advance in 1959 by formulating an algorithm to identify which factors might qualify as a "causally relevant condition." From the mid-1980s Richard Wright developed and popularised this "NESS" algorithm as a test for causation in the Law, preferring its formulation to the "INUS" algorithm suggested by Mackie.¹³⁹ Wright asserts:

[The] basic concept of causation, which we all intuitively employ, is formalized in the NESS test, which in its full form states that a condition contributed to some consequence if and only if it was necessary for the sufficiency of a set of existing antecedent conditions that was sufficient for the occurrence of the consequence.¹⁴⁰

We have already noted an illustration of the NESS test: in the hunters' case a subset of factors comprised of all antecedent factors except the carelessness of Hunter No.2 was *sufficient* for the occurrence of the death of the walker and the carelessness of Hunter No.1 was *necessary* for the sufficiency of that subset (i.e. in the hypothetical world consisting of this subset minus the breach by Hunter No.1 the death would not have happened); his carelessness was a "NESS" factor.¹⁴¹

137. See *supra* note 27 and accompanying text.

138. Richard W. Wright, *Actual Causation vs. Probabilistic Linkage: The Bane of Economic Analysis*, 14 J. LEGAL STUD. 435, 453 (1985); see also Richard W. Wright, *The Efficiency Theory of Causation and Responsibility: Unscientific Formalism and False Semantics*, 63 CHI.-KENT L. REV. 553 (1987).

139. J.L. Mackie, *Causes and Conditions*, 2 AM. PHIL. Q. 245 (1965); Richard W. Wright, *Causation, Responsibility, Risk, Probability, Naked Statistics, and Proof: Pruning the Bramble Bush by Clarifying the Concepts*, 73 IOWA L. REV. 1001, 1023 n.113 (1988).

140. Wright, *supra* note 36, at 1441.

141. Another useful illustration is: Chloe receives advice to invest in an internet start-up company from 2 independent advisers, Xavier and Yvette; and it can be shown that Chloe would have invested in the start-up had she received either advice (i.e. each advice alone would have been sufficient for Chloe to invest). The subset of

It is generally accepted by interested academic lawyers in the United States that using NESS (necessary element for the sufficiency of a sufficient set) as a test for "causation" seems, as a practical matter, to yield a coverage that is sufficiently comprehensive and "factual" to satisfy the wide projects of the Law. For example, the NESS test can accommodate mere conditions, omissions and the communication of information as "causes." It also deals smoothly with, and identifies as "causes," duplicate factors that are involved in an overdetermined outcome such as the death of the mountain walker, as we have just seen. It allows the fact that the analytically prior normative stage of breach determines which hypothetical no-breach worlds are of legal interest and it is an test not tainted by ideas of "breaks" in causation or causation "petering out."¹⁴²

Nonetheless, critics have claimed that there are residual problems with Wright's otherwise impressive exposition of the NESS device. Some criticisms are relatively minor such as concern with Wright's occasional appeal to intuitions¹⁴³ and his curious assertion that, in as much as NESS requires a "counterfactual" analysis, this is to proceed not by speculating on what might have happened in a hypothetical world where, *inter alia*, the specified factor is absent, but by considering what actually happened.¹⁴⁴

But one criticism of Wright, that by Fumerton and Kress, is fundamental and devastating. They demonstrate that, far from delivering on his claim that NESS "is not just a test for causation, but is itself the meaning of causation,"¹⁴⁵ Wright's reliance in NESS on the idea of "causal sufficiency"¹⁴⁶

factors, "all factors except Yvette's advice," is sufficient for Chloe's investment in the start-up; and within that subset Xavier's advice is necessary for the sufficiency of that subset; so Xavier's advice is a NESS factor in Chloe's investment.

142. Consider how NESS can cope with complex fact patterns that trouble philosophers. Suppose a priest will mix water and wine during a Mass and then drink the mixture. A puts poison in the water and B puts the antidote to the poison in the wine. If the priest combines the two liquids and drinks the mixture, he will suffer no ill-effects. But what if, in fact what happens is that after B had put the antidote in the wine, C had put an anti-antidote in the wine. Now the priest combines the liquids, drinks the mixture and dies. There is no difficulty in establishing that C is a NESS factor of the priest's death.

143. *E.g.*, Wright, *supra* note 139, at 1003, 1009.

144. *See, e.g.*, Wright, *supra* note 42, at 296; Richard W. Wright, *Causation in Tort Law*, 73 CAL. L. REV. 1735, 1806-07 (1985) [hereinafter Wright, *Causation*]; Wright, *supra* note 36, at 1445 n.67.

145. Wright, *Causation*, *supra* note 144, at 1802. It is worth elaborating the strong claims that Wright makes: that NESS provides "a comprehensive, factual test of actual causation," *id.* at 1774; that NESS is "a test for causal contribution that is applicable to the entire spectrum of causation cases," *id.* at 1788; that "the 'necessary element of a sufficient set' formula is the essence of the concept of causation," *id.* at 1805; that the test has a "fundamental identity with the basic concept of causation," *id.* at 1789; that "[t]he NESS test captures the essential meaning of the concept of causation," *id.*; that NESS "capture[s] the essence of . . . causation," Wright, *supra*

involves "vicious conceptual circularity."¹⁴⁷ This attack is indeed fatal to Wright's claim concerning the *character* of the NESS test. Nevertheless, it does not, in my view, detract from the potential practical value of NESS to the lawyer.

Let me explain by re-capping the approach I advocate. I have argued that "causation" has been used to communicate answers to different questions. I then argued that lawyers should explicitly choose just one interrogation to underlie causal usage in Law. Next I argued that this interrogation should be chosen to meet the wide needs of the Law. These range from the conceptualization of a farmer's blameless breach of contract "causing" a loss to a retailer, to determining which factors would be involved in the most efficient regulation of the risks of hunting accidents, and to identifying the role played by a single vote within a unanimous vote to expel a club member.

In all these projects the Law must be able to identify whenever a specified factor was "involved" in the existence of a particular phenomenon of interest, where the notion of "involvement" identifies that there is a contrast between the actual world and some hypothetical world from which we exclude (at least) that specified factor: this contrast being that, while in the former world the phenomenon exists, in the latter it does not. We can generate such contrasts of necessity in three ways. For example, when there is this contrast between the actual world and a hypothetical world from which we simply exclude the specified factor, we can convey this information by saying

note 139, at 1019; that "the concept of causation [is] embodied in the NESS test," Richard W. Wright, *Liability for Possible Wrongs: Causation, Statistical Probability, and the Burden of Proof*, LOY. L.A. L. REV. (forthcoming 2008) [hereinafter Wright, *Liability for Possible Wrongs*]; and that "the NESS . . . test of natural causation . . . undercut the claims of the causal nihilists by providing, for the first time, a comprehensive test of natural causation capable of correctly resolving the causation issue in situations involving causal overdetermination," Richard W. Wright, *The Nightmare and the Noble Dream: Hart and Honoré on Causation and Responsibility*, in THE LEGACY OF H.L.A. HART: LEGAL, POLITICAL, AND MORAL PHILOSOPHY, *supra* note 3.

Wright's most recent work continues to display his refusal to address the fundamental Fumerton and Kress criticism that NESS cannot capture the "essence" of causation, it being merely an algorithm dependent on external "causal laws": for example see "there is a purely factual, non-normative concept of causation that underlies and is embodied in the NESS . . . test for singular instances of causation, which – given sufficient information about the particular factual situation and the possibly applicable causal laws – can be used to resolve any causal issue." Wright, *supra* note 42, at 289 (emphasis added).

146. Richard W. Wright, *Once More into the Bramble Bush: Duty, Causal Contribution, and the Extent of Legal Responsibility*, 54 VAND. L. REV. 1071, 1103 n.113 (2001).

147. Richard Fumerton & Ken Kress, *Causation and the Law: Preemption, Lawful Sufficiency, and Causal Sufficiency*, 64 LAW & CONTEMP. PROBS. 83, 84 (2001). Moreover, Fumerton and Kress point out that Wright's use of crucial terms such as "necessity" and "sufficiency" lacks adequate precision. *Id.*

that the factor was involved in the existence of the phenomenon by being “necessary” for it. When there is this contrast between the actual world and a hypothetical world from which we exclude both the specified factor and a duplicate factor, we can convey this information by saying that the factor was involved in the existence of the phenomenon by a relation of “duplicate necessity”. In a similar way we can identify a third form of involvement, namely “contribution” to the existence of the phenomenon.

I argue that the most convenient choice of interrogation to underlie causal usage in Law is this one of “involvement”: whether a specified factor was “involved” in the existence of a particular phenomenon in any of these 3 ways. Now we can see the true value of the NESS idea: not as a self-evident “meaning of causation”, but simply as an extremely effective algorithm for identifying all the relationships of involvement (between a specified factor and the existence of a particular phenomenon) with which the Law must deal and which I have argued should be *chosen* as the meaning of causation in the Law.

Because this determination of involvement will be made using our knowledge of the physical laws of nature, evidence of behaviour and so on, choosing “involvement” as the meaning of “causation” in Law carries the potential for the concept of causation to be untainted by normative controversies. This would mean, for example, that where all the facts of the case are known, there would be no room for disagreement on the issue of “causation”. In order for that potential to be realised, however, we need to pinpoint all forms of involvement of interest to the Law and *then* choose an interrogation algorithm that is explicitly designated in such a way that it identifies *all* of these.

It is Wright’s failure to accept that NESS is merely a device we can manipulate to serve the role we have assigned it that has led to his account being incoherent, specifically in relation to the issue of disaggregation and in relation to how NESS is to be applied to cases of double omissions.

1. Contribution, NESS and Disaggregation

We have seen how the design of NESS allows us to identify involvement by a connection of necessity and involvement by a connection of duplicate necessity. But the Law is also concerned with a form of involvement I call “contribution” and this presents us with a choice of how widely to specify the NESS algorithm. Earlier I illustrated the Law’s interest with contribution using the example of a club’s governing committee unanimously voting in favour of the expulsion of Member X, where a majority of only 6 was needed. We saw that the most convenient way to accommodate the Law’s concern with the conduct of the individual voter is if the interrogation underlying causal usage in the Law encompasses this “contribution” form of involvement. Yet again we can identify this form of involvement using the NESS algorithm: there is a sub-set of factors including the vote of committee

member No.1 and some of the other votes (say the votes of Nos. 1, 2, 3, 4, 5 and 6) which is sufficient for the passage of the motion; and within which sub-set the vote of committee member No.1 is necessary for the sufficiency of the sub-set.¹⁴⁸

Let me illustrate this point yet again with a parallel case that I call the "separate weights case." Suppose that at noon a train weighing 10 units is to cross a bridge that can carry a weight of 25 units; at 9 a.m. X, with homicidal intent, hangs a 2-unit weight from the bridge; later in the morning a further 16 units of weight are hung from the bridge made up by a series of 2 unit weights hung by 8 other unrelated terrorists; at noon the train crosses the bridge, which collapses. Again we can smoothly use the NESS algorithm to identify the involvement of X's conduct in the bridge collapse: there is a sub-set of factors including the conduct of X and some other weights (say the weights placed by the first 7 of the other terrorists) which is sufficient for the bridge to collapse; and within which sub-set the conduct of X is necessary for the sufficiency of the sub-set.

But next suppose the 16 units were hung in just one solid indivisible mass at 10 a.m. by Y, an actor unrelated to X, in what I will call the "solid weight case." There can be no doubt about X's involvement in the collapse of the bridge: neither the order in which the weights were hung below the bridge nor their state of aggregation at these times are of physical relevance to that collapse. Just as in the "separate weights case", the 2-unit weight hung by X was part of the total weight pulling on the bridge just before noon and was, in this sense, involved in the collapse of the bridge.

Again, it is most convenient for Law if the interrogation underlying causal usage in the Law is made wide enough to encompass the "contribution" form of involvement illustrated by X's role in the "solid weight case," thereby locating elsewhere in the legal analysis discussion of any normative

148. Note that while the set of any *six* affirmative votes is sufficient for the actual passage of the motion, but-for the set of any *four* votes the motion would have been prevented.

An important medical illustration of the point in the text, is provided by *Hotson v. East Berkshire Housing Authority*, [1987] A.C. 750 (H.L.) (appeal taken from Eng.), where a boy fell from a tree rupturing some but not all the blood vessels supplying blood to his left femoral epiphysis. The hospital carelessly delayed treatment for 5 days and this delay produced swelling that blocked the blood supply from the remaining intact vessels, and, as a result of inadequate blood supply, the epiphysis became deformed resulting in permanent disability. *Id.* at 755. The medical evidence was unclear about the percentage of blood vessels that had been ruptured by the fall and about how many vessels needed to be disrupted before the resultant lack of blood supply would result in the permanent disability. *Id.* at 756. Yet while the hospital's wrongful disruption of the supply from the vessels that had remained intact after the fall could not be shown to have been either necessary or sufficient for the occurrence of the permanent disability, that disruption can qualify as a NESS factor *if* the NESS algorithm permits disaggregation of the blocked supply from blood vessels ruptured in the fall. See Wright, *Liability for Possible Wrongs*, *supra* note 145.

distinction the Law might draw between X's role in this case and X's role in the "separate weights case."¹⁴⁹ As we have seen, this has two very great advantages. First, it ensures that causal usage does not mask controversial questions concerning whether it should be accepted that the order in which the weights were placed and their state of aggregation do indeed provide normative reasons for treating X differently in the two cases. The second related advantage is that such questions are addressed under other doctrinal labels where their normative nature is more likely to be exposed.

But before we can smoothly use the NESS algorithm to achieve this catchment, that is to identify X's involvement in both cases, we must explicitly specify that in applying the NESS algorithm disaggregation of the solid weight placed by Y is allowed. Hart and Honoré's unwillingness to make this move was attacked by Wright.¹⁵⁰ Unfortunately Wright merely asserts that disaggregation is allowed within NESS. Since he does not recognize that we *choose* the interrogation underlying causal usage, he fails to explain why a narrower interrogation that would not identify X's involvement in the "solid weight" case (for example, NESS without disaggregation) would be less useful for the Law. Yet such an explanation is obvious: the narrower interrogation would mask whatever normative distinctions there might be between the "solid weight" case and the "separate weights" case.

Moreover, Wright does not adequately address other disaggregation problems such as whether it is coherent, acceptable, convenient or wise notionally to disaggregate an individual person's decision. For example, suppose Y will decide to enter transaction T in July once he has sixteen, let me call them "sound and weighty," reasons to do so. By May he has sixteen such reasons and decides to enter the transaction. In June Z gives Y two more sound and weighty reasons. Whether Z is a NESS factor of Y's entry into the transaction in July, by virtue of a disaggregation of the 16 reasons that had triggered a past indivisible decision, is not self-evident in Wright's account of that algorithm.¹⁵¹

149. Philosophers who do not appreciate that we must choose the interrogation underlying causal usage (e.g. blame, explanation, physical role, involvement and so on) including the individuation of the relata (i.e. the factor and the outcome), face stark problems in such situations. See, e.g., Jonathan Schaffer, *Overdetermining Causes*, 114 PHIL. STUD. 23, 28 (2003).

150. Wright, *supra* note 139, at 1035.

151. An even more common issue is illustrated by the simpler case where: by May Y has 16 "sound and weighty" reasons and decides to enter the transaction; and in June Z gives Y 16 new sound and weighty reasons, that is reasons that would have been sufficient to trigger the decision. Is this a case where Z is a NESS factor and entry into the transaction was overdetermined; or does Y's past "decision" in May preclude Z being a NESS factor even though entry into the transaction does not occur until July?

Again this is because Wright sees NESS as "not just a test for causation, but... itself the meaning of causation."¹⁵² In contrast, I argue that NESS is merely an algorithm; an algorithm the catchment of which we design so that it will identify all forms of involvement of interest to the Law. Therefore, there must be a prior debate about what would be convenient for the Law to identify as a "cause." Since I have reasons to conclude it would be convenient for the Law to identify as a "cause" the involvement of X in the solid weight case and of Z in the transaction example, I would explicitly design NESS to have this catchment.

2. Dependent Double Omissions and NESS

A second flaw in Wright's account of NESS is his handling of dependent double omission cases. Suppose a manufacturer of sun screen, M, carelessly fails to provide a warning on its product label that the sun screen should not be used in salt water because this might trigger severe dermatitis. The buyer, a father, carelessly fails to read the label and applies the sunscreen to his infant, C, who then swims in the ocean and contracts dermatitis. In such circumstances, Wright asserts that the father satisfies the NESS algorithm, but the manufacturer does not. The manufacturer is not a NESS factor because "the failure to provide a proper safeguard has no causal effect when there was or would have been no attempt to use the safeguard":¹⁵³ any potential effect of the failure-to-provide might have had, Wright claims, has been "preempted" by the failure-to-use.¹⁵⁴ Critics such as Alexander describe this result as "problematic,"¹⁵⁵ while Fischer has powerfully demonstrated that, unless it is more narrowly specified, which Wright has failed to do, NESS applies symmetrically to both omissions.¹⁵⁶

The inadequacy of Wright's most recent attempt¹⁵⁷ to rebut Fischer's attack is easily demonstrated with his analysis of *Saunders System Birmingham Co. v. Adams*.¹⁵⁸ The alleged facts were: a rental car had defective brakes due to a failure to repair by the rental company and a collision occurred when a motorist driving the rental car did not attempt to brake.¹⁵⁹ Wright accepts that each omission (the failure-to-repair and the failure-to-attempt-to-brake) separately "guarantee" the failure of the braking-stops-car "causal process." Yet he then asserts that "[t]he failure to attempt to use the brakes preempted the potential negative causal effect of the other non-instantiated conditions in the

152. Wright, *Causation*, *supra* note 144, at 1802.

153. Wright, *supra* note 146, at 1124.

154. Wright, *supra* note 42, at 302.

155. Larry A. Alexander, *Causation and Corrective Justice: Does Tort Law Make Sense?*, 6 LAW & PHIL. 1, 13 n.27 (1987).

156. David A. Fischer, *Insufficient Causes*, 94 KY. L.J. 277 (2005-2006).

157. Wright, *supra* note 42.

158. 117 So. 72 (Ala. 1928).

159. *Id.* at 74.

braking-stops-car causal process.” This means, claims Wright, that the failure-to-repair is not a cause of the collision but the failure-to-attempt-to-brake *is* a cause of it (even though that failure is a failure-to-attempt-to-brake with brakes that did not work)!¹⁶⁰ The only indication of how Wright arrives at this conclusion is his assertion that we “must”¹⁶¹ look at the sequence of the causal process that did not take place.

Two obvious objections to Wright’s analysis can be made. First, it is not at all clear why we “must” look at this sequence. After all, in the actual world our two specified factors (the failure-to-repair and the failure-to-attempt-to-brake) did not occur in sequence; omissions simply do not “occur in sequence”; here both persisted at the time of the actual phenomenon of interest, namely the collision; so notions of one omission pre-empting another omission are, without more explanation, incoherent. Secondly, Wright merely stipulates that the relevant sequence would have started with “the driver’s depressing the brake pedal.”¹⁶² Yet we could just as easily have stipulated that the first step in the braking-stops-car causal process was the brake repair: after all, “delivery” of the motorist’s foot on a workable brake pedal *is not needed* in the braking-stops-car causal process *until* the working brakes are in place.

Wright has no coherent rationale for choosing to stipulate the sequence in the way he does, and so, ironically, he stipulates *the exact opposite sequence* in a different example concerning the failure of a house-building project. Here he asserts that if there

was a simultaneous failure to deliver concrete for the foundation and lumber for the framing of the house, the failure to deliver the concrete, which results in the failure of the house-building causal process at the foundation-building stage, preempts the potential negative causal effect of the failure to deliver the lumber, which *is not needed until* the subsequent framing stage, the occurrence of which depends on the prior occurrence of the foundation-building stage.¹⁶³ [emphasis added]

How to handle these dependent double omission cases is not as self-evident as Wright seems to believe. Wright’s confident, but erroneous, belief may rest on a failure to accommodate nuances of the problem that elsewhere he seems to appreciate. Take the earlier example of a worker who is working on scaffolding when he slips and falls breaking his arms.¹⁶⁴ He sues his employer for failing to supply a harness but there is evidence that, even had it been supplied, the worker would have omitted to use it. On such facts, the

160. Wright, *supra* note 42, at 304.

161. *Id.* at 303.

162. *Id.* at 304-05.

163. *Id.* at 306.

164. See *supra* text preceding note 38.

worker will undoubtedly fail in his claim against his employer. But Wright asserts that this is because "the failure to provide the safeguard was not a cause, but rather . . . was preempted by the fact that there would have been no attempt to use the safeguard."¹⁶⁵ It is certainly true that the worker will be unable to show that the employer's breach was involved in his injury *by a connection of necessity*, but, as Wright should concede, this does not exhaust the possibilities accommodated within the NESS algorithm. It leaves open the possibility of both omissions being recognized as involved, NESS factors, in his injury *by a connection of duplicate necessity*.¹⁶⁶

Moreover, recognition that the employer's omission was a NESS factor of (that is, involved in) the broken arms is consistent with the no liability result if the worker cannot establish a *quite separate requirement*¹⁶⁷, for example that the "injury" of his broken arms constituted "damage" to his normal expectancies. Just as we saw how the vote of Committee Member No.1 can be recognized as a NESS factor (a "cause") of the injury of expulsion, so too the employer's breach can be a NESS factor of the injury of the broken arms; and just as the injury of expulsion could not constitute legally recognized "damage" because it would still have occurred had there been no breach of legal obligation, so too the injury of the broken arms may not constitute "damage" to the worker on the basis that it would still have occurred had the employer not breached his duty (because, had he supplied the harness, the worker would not have used it).¹⁶⁸

In short, Wright's bald assertions about how NESS operates with respect to the disaggregation issue and in the dependent double omission cases confirm that he still sees NESS as a freestanding account of causation. Yet as I have argued in this Essay, unless a choice of underlying interrogation is specified at the outset, no such an account can succeed.

In summary: when we investigate the world we must choose between a variety of possible limited interrogations: blame, explanation, physical role, involvement and so on. Since the different results of these interrogations have often been expressed in causal terms, there can be no coherent account of "causation" in the Law until we have chosen which interrogation *should* be the one to underlie causal terms in the Law. Though lawyers have a choice of which interrogation will underlie their causal terms, I have argued that the greatest clarity is afforded to legal analysis when lawyers choose an interrogation that uses our knowledge of the physical laws of nature, evidence of behaviour and so on to identify when a specified factor is "involved" in any way in the existence of the particular phenomenon of interest. For example, once we conclude that there are sound reasons why it would be convenient

165. Wright, *supra* note 42, at 302.

166. *See supra* note 38.

167. *See supra* text at and following note 49.

168. One can even express this point in Wright's own terminology: that the worker's claim falls foul of "the no-worse-off limitation" on the scope of liability for consequences caused by the breach. *See* Wright, *supra* note 36, at 1434.

for the Law to be able to identify the involvement of X in the “solid weights” case and of the involvement of the manufacturer’s omission in the sunscreen case, we can then explicitly design the NESS algorithm to interrogate the world in such a way that it identifies these relationships. Such a wide ambit for causal terminology in the Law provides the precision and breadth needed while at the same time locating all normative concerns elsewhere in the legal analysis where their exposure and evaluation is more likely to occur.

F. Future Debates

While past controversy about the meaning of “causation” in the Law is being resolved in favour of embracing the wide notion of involvement, for which NESS seems to provide a relatively satisfactory algorithm, far greater debate now centres around two other related issues. First is the problem of where and why the Law should relax its rules of proof in relation to this notion of involvement to assist, for example, a plaintiff who would otherwise face insuperable evidentiary gaps. A classic example is where two unrelated hunters carelessly shoot in the direction of a mountain walker who is struck by one bullet but there is no way of identifying from which of the two guns that bullet came.

The second area of intense legal interest is the “scope” element: the appropriate scope of responsibility for the consequences of wrongful conduct. Legal responsibility only ever extends to some of these consequences and there are a variety of normative concerns that operate to confine the scope of a defendant’s legal responsibility for the consequences of his conduct. For example, the Law might hold that the particular consequence of breach (inadequately penned sheep washed overboard) fell outside the mischief to which the statutory obligation to fence was directed (disease transmission).¹⁶⁹ Or it might hold that where a pedestrian, hospitalised after being hit by a careless motorist, is attacked by a berserk axe-wielding fellow-patient, his axe injuries fell outside the appropriate scope of the defendant-motorist’s legal liability for speeding. These normative “scope” concerns have not yet been adequately investigated – hindering clarity in judicial reasoning and therefore producing uncertainty in the Law.

169. *Gorris v. Scott*, 9 L.R. Exch. 125 (1874).