The Flexibility of Description and NESS Causation

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Introduction

Two arsonists start separate fires to the same house. Each fire is sufficient to destroy the house on its own. Neither is therefore *sine qua non* necessary to the loss. A growing number of scholars suggest that the *sufficiency* of the two fires deems them causes-in-fact of the loss. The most influential *sufficiency* analysis of recent years is the NESS test developed by Hart and Honoré¹ and Richard Wright.² As David Fischer writes:³

The NESS test of causation popularized by Professor Richard Wright, is emerging as the new supplement to the but-for test for the twenty first century.

That test is as follows:

[A] particular condition was a cause of (condition contributing to) a specific consequence if and only if it was a *necessary* element of a set of antecedent actual conditions that was *sufficient* for the occurrence of the consequence.⁴

Wright boldly declares that the NESS test “not only resolves but also clarifies and illuminates the causal issues in the problematic causation cases that have plagued tort scholars for centuries”⁵ and that it “is the essence of the concept of causation”.⁶ The suggestion that the NESS test resolves all outstanding causation issues is overstated. As this paper argues, the test provides a way for judges to allocate responsibility in the face of prohibitively complex or indeterminate causal processes. It argues that there are essentially three situations where the law might viably substitute a *necessity* for a *sufficiency* test:

(a) where the law must attribute responsibility for a legally indivisible entity that, in nature, is composed of infinitely smaller organic constituent parts (such as house destroyed by fire);

(b) where the law must attribute responsibility for the passing of a legal or natural threshold (such as intoxication or death); or

(c) where it is impossible for a court to determine the necessary causes in a particular process because the process is too complex or microscopic for explication in a courtroom.

The reliability of a *sine qua non* or NESS analyses depends on the causation question. Causes and effects can be framed in varying degrees of detail. This paper argues the degree of detail given to an effect affects how we determine causes. Where generalized descriptions are given to an outcome, more than one causal factor can appear as independently sufficient
to produce the result. If more than one cause appears as sufficient, none of these sufficient causes appear as necessary. In these cases, the *sine qua non* test does not work and a sufficiency test may be required. On the other hand, if the description of the result is highly detailed, a greater number of the attending circumstances will be deemed necessary to that particularly described result. In these cases, the *sine qua non* test works fine.

The contribution of this paper is, first, to clarify that the NESS test only improves upon the *sine qua non* test where we are concerned with broadly or generally described outcomes. This point is neglected by proponents of NESS causation and leads to confusion. Except where broad descriptions are employed, the NESS test adds nothing. On the other hand, broad descriptions are often essential and necessary to legal decision-making. The second contribution of this paper is to suggest that broad descriptions are needed where courts are concerned with something considered indivisible, such as a threshold, or with prohibitively complex processes. The NESS test suitably responds to these cases.

**Necessity and Sufficiency**

Since Hume, the modern approach to the question of causation has been to disregard the possibility of unobservable “forces” or “powers” acting on the elements of a causal sequence. Rather, Hume argues causation is only understood through generalizing from our empirical evidence. Where two things occur in “constant conjunction” within a “regular sequence” the factors come to be experienced as “cause” and “effect”. The thesis was revised and reformulated by J.S. Mill in *System of Logic*. Mill accepted that causation is not discoverable from innate properties or forces operating within or on the elements of an event. He rejected, on the other hand, Hume’s suggestion that the “conjunction” between elements to a sequence need be universal and “constant”. Mill argued that a *plurality of factors* can bring about a particular type of occurrence. A “cause” does not need to precede an “effect” in *every* set of circumstances. Causation can be established if the preceding element was necessary for the event in the particular circumstances of the occurrence. The theory developed in *System of Logic* leaves us with the *sine qua non* test used to determine causation in law today.

The NESS test extends the *plurality* thesis further. While Mill argued that a plurality of factors or circumstances can produce a type of outcome, H&H and Wright suggest a number of concurrent factors can be sufficient to produce a particular occurrence in a specific instance. The NESS test responds to instances where there appears to be a multiplicity of sufficient causes. There are a number of famous examples in the cases and literature:

- A fire is set by the engine of a train. This fire unites with a second fire sparked by the engine of a different train owned by a different railroad company. The fire destroys a plaintiff’s property.
- Two motorcyclists drive noisily past a horse-drawn wagon. The sound of the motorcycles spooks the horse and causes a plaintiff injury.
- Two hunters are grouse hunting. They simultaneously shoot and strike a third hunter who instantly dies. It is impossible to say which bullet strikes first.
- The accumulation of five units of pollution is sufficient to cause an injury. Seven defendants, acting independently, each discharge one unit of pollution.
In these cases, our intuitions suggest that each of the defendants is responsible. It would seem counterintuitive to suppose that neither fire destroyed the property or neither bullet fatally wounded the third hunter, for example. On the other hand, the *sine qua non* test would relieve both railroad companies and both hunters of responsibility. We are not able to say that, *but for* the negligence of the first railroad company, the plaintiff's property would have gone unharmed. If the first engine hadn't sparked a fire, the second spark would have. Neither of the motorcycles is necessary to stir the horse. If the first hadn't, the second would have and *vice versa*. If the first hunter's bullet hadn't fatally struck the victim, the second would have and *vice versa* (similarly, for each individual polluter). The *sine qua non* test leaves these plaintiffs without recovery, notwithstanding that the sources of their injuries are more or less clear.

**Substantial Factors and Material Contribution**

In response, American tort law adopts a "substantial factor" test and Anglo-Canadian law a "material contribution" test. These tests supplement the shortcomings of *sine qua non* causation. In instances of where intuitively causal factors are not deemed independently necessary for the loss, a court can instead ask whether the defendant's conduct was a "substantial factor" or "materially contributed" to the circumstances of a loss. The test seems clear. Both fires, both gunmen and both motorcycles can easily be said to have "materially contributed" as "substantial factors" to the losses in issue. On the other hand, it is far from clear what phrase "material contribution" or "substantial factor" actually means. Wright has attacked the *substantial factor* test as vacuous rhetoric providing little instruction to judges in hard cases. The tests suggest that a factor is "substantial" or "materially contributes" to a loss if it helps bring about the loss. A factor which helps *cause* an occurrence, is thus considered one of its *causes*. The language is clearly circular.

Imagine that there was a fourth hunter who simply fired a blank round. Imagine that at the time the two fires engulfed the plaintiff's property the local firefighters were sleeping on shift, but that the fire station was an hour away and that the plaintiff's property was completely destroyed in less than an hour. We would intuitively say the blank round and sleeping firefighters did not "materially contribute" to those losses. Why is this so? Normally we would say that this is so because they were not *necessary* ingredients in bringing about the loss. If the third gunman hadn't fired the black round, death still would have ensued. If the firefighters hadn't been sleeping, they still would have arrived at the scene too late to save the building. On the other hand, the second gunmen's bullets and the second steam engine were equally unnecessary to the losses. As were the first. The "material contribution" and "substantial factor" tests do not provide much in guidance to distinguish between these intuitively causal and intuitively non-causal factors.

**The NESS Test**

The NESS test provides a means to handle these types of problems. We can say that the third gunmen, the sleeping firefighters or the electric car were not "causes" as they were, both, *unnecessary* to produce the loss and *insufficient* to do so. The spark from the first engine, however, was a necessary element in starting the first fire and was *sufficient* in the circumstances to bring about the loss. The spark was, thus, a "cause". Similarly, the first motorcycle or the first shot were necessary parts of sufficient sets and, thus, "causes" under the NESS test.
General and Specific Descriptions

Preemptive Causation
The principal virtue of the NESS test is in its ability to make up for the shortcomings of the sine qua non test where there appears to have been multiple sufficient causes. Wright also declares the NESS test as an advance over sine qua non causation for its ability to resolve instances of “preemptive causation”. Examples in the literature include:

- Two assassins independently plot to kill a desert traveller. The first poisons the water in the traveller’s canteen. The second, not knowing about the poison, empties the canteen. When the traveller opens her canteen to have a drink, she finds it empty and ultimately dies of thirst.
- A mechanic fails to make the required repairs to a set of car brakes. The driver of the car approaches an intersection. He does not attempt to use the brake pedal and strikes the car ahead of him.

In a case of “preemptive causation”, a factor that could have been sufficient to produce a loss is “preempted” by a second that actually brings about the loss. The attempt of the first assassin is preempted by the actions of the second. The traveller dies of thirst, not of poison. Similarly, the negligence of the garage in repairing the brakes is said to have been preempted by the negligence of the driver.

Notably, in both examples, the preempted set of factors was sufficient to produce the loss. The NESS test, however, is more specific. It requires that the set of conditions sufficient to produce the loss actually be operating at the time of the loss. If a man dies in a hospital the day before a nuclear attack kills everyone in his town, we would not say that the nuclear attack, though sufficient to kill him had he survived, was a “cause” of his death. It was not actually operating at the time. Where this qualification is added, the NESS test can be used to resolve the examples above.

Nevertheless, this analysis is not an advance over sine qua non. Both tests operate in the same way. Suppose a man is fatally shot and lies bleeding on the street, beyond the hope of treatment. While lying on the street, another attacker stabs him until death. If we ask who is responsible for the victim’s death, the second attacker seems to be exculpated under the sine qua non test. The victim would have died as a result of the shooting regardless of the actions of the second attacker. On the other hand, if we ask who was responsible for the death in question or his death under the circumstances it is clear that both assailants are responsible. The victim would have survived longer had it not been for the second attacker. Both factors were, thus, necessary to bring about the specific death in question.

This is essentially the same qualification Wright adds to the NESS test when he requires that only sufficient sets actually operating at the time of an occurrence be considered. Both assailant’s actions are necessary and sufficient to produce the loss suffered in the circumstances. It is only where a general description of the events is used to describe an occurrence that a sufficiency test is required. Mackie makes this observation regarding the desert assassins example. He writes.
If \( Y \) is the fact that the traveller died of thirst, then the puncturing of the can both caused and was necessary in the circumstances for \( Y \). If \( Y \) is the fact that the traveller died on this journey, then the puncturing of the can neither caused nor was necessary in the circumstances for \( Y \).

Lawyers might consider whether a death would have occurred, “but for” cause \( Y \). However, this question contains implicit limits. Everyone dies. If \( Y \) doesn't kill a person, an infinite amount of other things might and at least one thing will. A death needs to be framed with some degree of specificity in order for a factor to appear as a necessary sine qua non or sufficient NESS cause actually operating at the time of the death. Wright, thus, requires that sufficient sets actually be operating at the time of loss in order to be deemed NESS causes. As is discussed below, this qualification leaves the NESS test without anything to add to sine qua non causation in these circumstances.

The Flexibility of Description
There is a great deal of flexibility with respect to the generality or specificity that can used to define an occurrence. At the highest point of specificity, a sequence of events will have both been necessary to produce the exact set of circumstances which took place and, moreover, the only sufficient sequence which could have produced those circumstances. Nothing besides the life of Elvis Presley, for example, could have produced the exact circumstances of his death. As the description of the event becomes more generalized, other factors appear sufficient to produce the generally-described type of loss. Where factors operate concurrently to produce a generally-described loss, the NESS test can be used to assign a causal status to the sufficient, though unnecessary factors.

Suppose, for example, two children, without planning or coordination, simultaneously swipe at a large bowl of salad and knock it off a kitchen table. Suppose we describe the result as “the bowl falling on the floor”. Neither of the swipes at the bowl is necessary for this result. If the first child hadn't struck the salad bowl, the other would have. The sine qua non test seems to suggest that neither child caused the loss. We need to resort to NESS causation. Both of the swipes at the bowl, on the other hand, are independently sufficient to cause the bowl to fall on the floor. The children were, thus, NESS but not sine qua non contributors.

If, on the other hand, the description of the result includes the exact arrangement of the salad on the floor, both swipes at the bowl become sine qua non factors. Both are necessary for sending the bowl flying off the table with a particular velocity and trajectory and thus are necessary to produce the specifics of how the salad lands on the floor.

Wright offers two arguments against the idea that the generality employed in a description of an effect affects the necessity of contributing factors and, thus, the relevance of the NESS test. He argues that it is circular to, first, describe an event in detail (“as it came about”) and then to suggest that the details were necessary to the event, so described. Wright's argument, however, demonstrates the same circularity. Wright suggests that irrelevant circumstances which happen to contextualize a cause-effect relationship can be discounted as “causes” if we limit ourselves to considering the sufficient sets actually operating in the circumstances. But how do we determine whether a factor is actually operating? Wright provides no guidance. He writes, referring to the “desert traveller” example:
How this result came about is the very issue to be resolved. To include how the result came about in the description of the result is to assume an answer to the causal question before it is posed. Thus, in the desert traveller example, the question of whether the traveller died by thirst, by poisoning, by both, or by neither, is precisely the issue that the causal inquirer is supposed to resolve. To describe the death as ‘death by thirst’ is to assume an answer to that question before it is posed...

He suggests that the assumption that the victim “died by thirst” rather than simply “died on this journey” decides the answer to the causal question before it is asked. This is only partly true. We might infer that the victim “died by thirst” when we discover a dehydrated body. This link in the causal chain is assumed. However, that is not what is in issue. It is simply part of the narrative. The causal puzzle is whether the first or second assassin played a causal role in that particular death. The question is “Why was the victim’s body dehydrated?” or “Was the conduct of one or both of the actors necessary in bringing this about?” Describing the death in detail does not assist in telling us which of the actors is responsible.

Second, Wright argues that using specific descriptions of an event makes every circumstance or factor situating an event a “cause” and does not allow us to distinguish between causes and correlations. Wright uses the example of two shooters whose bullets simultaneously strike a victim’s heart. Wright asks us to imagine that a third party was climbing Mount Everest at the time. He argues that employing a specific description of the heart wound leaves it impossible to distinguish between causal and correlative factors situating the attack such as the third party’s ascent of Everest:

None of the three conditions by itself was a but-for-cause of the victim’s death, but the cluster composed of all three of them was a but-for-cause. The aggregate but-for test does not distinguish the actual causes-- the two bullets-- from completely irrelevant conditions such as B’s climbing Mt. Everest.

It is true that employing a description which specifies every circumstance situating an event leaves it impossible to separate causal from merely correlative factors. As suggested above, every factor will be “but for” necessary to produce that precise description. On the other hand, Wright overstates Mackie’s point. There is a clear middle ground between employing a perfect description that includes every circumstance of an event and one that is hopelessly vague. There is clearly, for example, a middle ground between asking “Why all the circumstances on the earth appear as they did at the moment of this victim’s death, including B’s climbing of Everest?” and asking “Why do people die?” We might ask why the victim died at that time. Posing the question in this manner leads to overdetermined causation, given that the two sufficient bullets pierced the victim’s chest at the same time. On the other hand, we might ask why the victim died of two bullet wounds. Here, both bullets are sine qua non necessary to the latter question. Both questions are legitimate. The first is slightly more generalized than the second. However, both questions exist somewhere between perfect specificity and perfect generality. Every causal question put to the courts will be framed in this middle ground.

The NESS test, however, has a fatal problem with broadly-described consecutive factors. If the description of an event’s duration is extended far enough, we may be required to label things as “causes” that are intuitively non-causal. Imagine the victim dies immediately upon
being shot. The second assailant however, does not know this and, like before, stabs the by-
now-deceased victim. If our test is *sufficiency* and we ask what factors were sufficient to
cause the loss *that day*, the stabbing, as a *sufficient* factor, is a cause of the death. Clearly
this is wrong. The man was already dead. Wright, accordingly, requires the qualification that
a NESS factor be *operating at the time* of a loss—or, that the time frame under consideration
be stated with specificity and precision. If we state the time of death with precision, however,
the *sine qua non* test is perfectly acceptable and the NESS test adds nothing. *Sine qua non*
like the NESS test, can explain that the stabbing party's act was *necessary* to precipitate and,
thus, cause the death of the victim in the first scenario. It is *unnecessary* to the causal
sequence in the second scenario where the stabbing party attacks an already dead victim.
The NESS test is relevant to circumstances where an event is described so generally as to
allow for multiple *concurrently-operating* factors *sufficient* to a produce a loss. It does not
assist with “preemptive causation” questions where sufficient factors occur one after the other.

**Indivisible Entities and Uncertain Causal Processes**

As I have argued, the degree of generality or specificity given to the description of an
occurrence affects whether the *sine qua non* or a NESS test for causation better supports our
“causal intuitions”. If a description is broad enough to include more than one sufficient causal
factor or set of factors, certain factors will appear redundant, unnecessary and thus, not *sine
qua non* “causes”. In such circumstances, the NESS test can be used to assign a causal role
to the redundant factors.

This raises a further question. If a *sine qua non* test provides an adequate explanation of
causation where descriptions of events are specified with precision, why would the law ever
employ generalized descriptions? I suggest three reasons. First, the law must often assign
responsibility for legally or putatively indivisible losses or injuries. Second, lawyers and
judges often need to deal with minute or intricately complex causal processes unsuited for
explication in the court room. Where it is intuitively clear that a factor contributed to a loss,
but impossible, due to the complexity of a causal process, to state the nature of that
contribution, the law can employ a sufficiency test to ensure that a causal contributor is held
liable. The third reason borrows from the other two. Where a reaction results after some
*threshold* is breached and more than one party is responsible for the breach, a sufficiency
test, again, can be used to hold parties accountable.

*Indivisible Consequences*

Let’s slightly modify an example from above. Two independently-acting arsonists, both
unaware of the presence of the other party, start a house on fire. One arsonist starts a fire at
the north side of the house; the other, from the south side. Both fires are sufficiently powerful
to destroy the house in its entirety. Each fire, however, consumes one part of the house
alone. The fires join in centre to destroy the remains. Both arsonists are held jointly and
severally liable for the entire damage. This result, in one sense, seems fictive. While both
fires are responsible for the destruction of the entire house, the first fire destroys one part of
the house and the other fire, another. The fires only destroy part of the house together. A
more specific (and accurate) description of the damage would detail the portions of the house
destroyed by each.

Nevertheless, the house may be treated, for the purposes of law, as an indivisible entity and
not as the aggregate of its constituent parts. If the law were to simply hold the parties to account for damage to the constituent parts of the thing, the *sine qua non* test works fine. We ask, “but for fire A, would this *part* of the house have been destroyed?”. On the other hand, where the law holds parties to account for a thing *as a whole* the *sine qua non* test leads to *causal overdetermination*. Both fires are sufficient to destroy the house and, thus, neither are necessary. Here, the NESS test is useful. This accords with our general observation that broader descriptions of events can allow for multiple sufficient causes and, thus, create situations of *causal overdetermination* resolvable using the NESS test.

It is, thus, the conceptual or legal existence of a “house” as either a complete entity or a collection of its parts that dictates the procedure used to identify causes. Wright, although far from admitting that the NESS test is something to be used as a matter of policy or exigency, seems, on the other hand, to partly concede the point. He quotes Betch and Miller’s comments on the redundant fires example:

> [I]n minute detail, it would probably appear that the defendant’s fire was a cause, for the positions of the smoke, ashes, and some parts of the ruins might well have been caused by the defendant’s fire.

Wright responds, as follows:

> Again this assertion begs the question. Under this approach the defendant’s fire was a but-for cause only of the precise “positions of the smoke, ashes, and some parts of the ruins,” not of the destruction of the house, for which these precise details are irrelevant. The detailed description will be useful only if the plaintiff wishes to recover for damages that would not have occurred but for the precise position of the smoke and debris—a most unlikely lawsuit.

It is, thus, the pleadings, rather than the facts, themselves, that determine the applicability of the NESS test.

**Indivisible Causes**

It would likely be very difficult for a court to determine the precise measure of damage caused by each fire in this example. It would certainly be so if the two fires joined prior to reaching the house and consumed the entirety of the house together. When the fires meet, the energy of one fire becomes an inseparable part of the energy of the other. Pollution is another important example. In situations where pollutants mix together, one source becomes impossibly mixed with another. Determining the individual impact of either becomes impossible. In such circumstances, it is intuitively clear that both sources contribute to the injury. Each source forms an inseparable part of the same injuring force. Where the law is unable to distinguish between the contributions of one party to an injuring force and those of another, issues of *causal overdetermination* may arise. If two polluters each dump a sufficient amount of pollutants into a body of water to cause a plaintiff injury, neither act is *sine qua non* necessary for the injury. Yet both clearly contribute. NESS causation is useful here.

**Asymmetrical Overdetermination**

A related problem of *indivisibility* arises in cases evidencing what Michael Moore has described as *asymmetrical overdetermination*. A causal process is *asymmetrically overdetermined* if one of the contributing factors plays a lesser causal role and is, in itself,
insufficient to produce a loss, while another plays a larger, independently sufficient, role. Moore uses the fires example:

[S]uppose the fire set by the defendant is much smaller than the second fire; the two join as before and the resultant fire destroys the structure. The second fire would have been sufficient by itself to have destroyed the structure, but the defendant’s small fire would not have been, since it would have been extinguished by the available equipment before it could have destroyed the structure.

The causal ramifications are, again, different depending on whether we employ a rich or a broad description of the loss. If we employ a rich description detailing the exact measure and magnitude of the injuring force and the exact nature and scale of the loss suffered, all of the constituent elements, both big and small, will be collectively necessary and sufficient. The amount of pollutants released by one of the lesser contributing parties forms a necessary part of the nature and scope of the injury and the level of toxicity created by the conduct of all the parties. The sine qua non test aptly handles this situation. If a broad description of the loss is used, in contrast, the lesser injuring force is not a cause on the application of either the NESS or sine qua non test. If the type of damage suffered from exposure to pollution is described in a broad way, analogous to the destruction of a “house” as a singular totality, the release of a small, independently insufficient amount of pollution is neither necessary nor sufficient to produce the loss.

Wright’s answer to the problem of asymmetrical overdetermination is curious. On the one hand, Wright argues that is “useless tautology” to employ a description of an event in a degree of detail such that every preceding circumstance becomes a necessary part of the sequence. On the other hand, Wright seems to concede that a certain degree of detail in the description is required in order for an insufficient factor (i.e. the smaller fire) to form a necessary part of the sequence as an NESS cause. Referring to the concurrent fires example, he writes:

The same causal situation exists even if there were only two fires, one of which was independently sufficient and the other of which was not. The first fire was clearly a cause, since it was independently sufficient. But the second fire also was a cause. It was necessary for the sufficiency of a set of actual antecedent conditions which included another fire (the first) that was “at least large enough to be sufficient for the injury if it merged with a fire the size of the second fire.” The sufficiency of this set is not affected by the fact that the first fire was so large that it would have been sufficient by itself... The word of the quoted condition, “at least large enough,” is not a verbal gimmick. The condition is an actual one that existed on the particular occasion.

Wright’s answer is confusing. He argues that the condition “at least large enough” qualifies the hypothetical sufficient set under consideration to those actually existing at the time. However, if the larger fire was at least large enough to destroy the house, the second fire becomes an unnecessary part of the circumstances. It is neither sine qua non necessary, nor a necessary element in a broadly described sufficient set. It is true that the second fire is part of the conditions that actually existed at the time of the occurrence. However, if the second fire is an unnecessary part of those circumstances, it appears as a correlative rather than a causal factor.

Suppose one of the arsonists wears a wristwatch or that the fire is lit under a full moon.
These also form part of the conditions which contextualize the destruction of the house. The distinction between the smaller fire and the moon or watch is only explicable by reference to the consequences wrought by the energy of the fire. A fire, no matter the size, burns. Watches and moons do not. The smaller fire, moreover, played some role in the burning of the house. It was not necessary to destroy the "house" as an indivisible unit. It was, on the other hand, a necessary factor in effecting the nature, magnitude and shape of the destruction. The moon and wrist watch had no impact on the nature or scale of the destruction. It is only when we employ a rich description of the fire that the smaller fire becomes a necessary element to the sequence.

Perhaps this is what Wright is alluding to when he cryptically writes:

> The word of the quoted condition, 'at least large enough,' is not a verbal gimmick. The condition is an actual one that existed on the particular occasion.

The “actual one”, “at least large enough”, in Wright's comment, refers to an injuring force effecting a very specific injury. It is the force which destroys an entity in a particular manner and magnitude. The description of the “cause”, again, becomes inextricably linked to the description of the “effect”. A smaller fire is unnecessary to effect the damage, broadly-described, but was a necessary element in the richly-described destruction of the house. Employing this rich description, however, leads us to Betch and Miller’s conclusion that:

> in minute detail, it would probably appear that the defendant's [smaller] fire was a cause, for the positions of the smoke, ashes, and some parts of the ruins might well have been caused by the [smaller] fire.

Again, Wright's resistance to Mackie and Betch and Miller’s observation on this point seems misplaced given the necessity of using rich descriptions in order to make a smaller, independently-insufficient contributor a necessary element in a NESS (or equally, a sine qua non) set.

Notably, in cases of asymmetrical overdetermination—or, where there is a contributing sufficient factor and a contributing insufficient factor—an NESS assessment never adds anything to sine qua non causation. If a broad description is used, the larger fire will be both necessary and sufficient for the loss and the smaller fire, unnecessary and insufficient. If a rich description is used, both fires are sine qua non necessary. The NESS test adds nothing. It only becomes useful in situations where a broad description is employed and where there is more than one sufficient factor (or set of factors). These cases are likely easier for our “causal intuitions”. If two fires large enough to destroy a house combine, it is easy to intuit that both fires “materially contributed” to the damage. The NESS test provides a sophisticated explanation of why this is so. The relevance of the test, on the other hand, is dependent upon the how the consequences are described. Many things can burn a house down. Only a particular set can burn a house down in a particular way. The relevance of the NESS approach is dependent upon whether a legal inquiry is looking to resolve a general or particular causal question.

**Thresholds**
This conversation has an important application to causal questions that involve thresholds. Thresholds can have natural and physiological or social and legal basis. For example, after
reaching a certain blood-alcohol threshold, a person is no longer legally able operate a motor vehicle. While the effect of alcohol on a human body is a physiological process, the threshold, itself, is social. It has been set in light of the danger that attends combining alcohol with motor vehicle transportation. On the other hand, there are also strictly physiological thresholds. After a person reaches a blood alcohol level of 400 milligrams of alcohol for 100 millilitres of blood, he or she runs a serious risk of death. Death is a physiological threshold. Upon death, the heart will stop pumping blood and electrical activity in the brain will permanently cease. Thresholds can be breached by incremental contributions from a number of different sources. The (legal or physiological) injury incurred, on the other hand, is indivisible.

Where contributing factors are independently insufficient, but cumulatively sufficient to cause to breach a threshold, they are \textit{sine qua non} necessary in their aggregate. Suppose, for example, a patron at a bar is served alcohol by two different servers taking back-to-back shifts. The first server brings the patron a very large number of drinks sufficient to cause his death. He drinks these very fast and orders another round immediately from a second server who is unaware of the tab with the first. This round is sufficient, again, in itself, to put him past the point of death. If we think of the two rounds as having been consumed \textit{consecutively}, the first is a necessary \textit{and} sufficient cause of the death, and the second is not. A \textit{sine qua non} test will suffice. As the first round was sufficient to cause his death, the second round was unnecessary. If we think of them as having been consumed \textit{concurrently}, on the other hand, neither round is necessary. If he did not take the first round, the second would kill him and \textit{vice versa}. An NESS analysis is needed.

In situations of \textit{asymmetrical overdetermination}, again, \textit{sine qua non} causation will suffice. Suppose the first round of drinks was more modest and insufficient to cause the patron much harm. Before these drinks are absorbed into the patron blood stream, the second server brings a round sufficient, in itself, to kill him. Was the first round a necessary and sufficient element in the death? If we simply consider whether the round contributed the patron’s state of drunkenness or toxicity, the answer is clearly ‘yes’. Intoxication is gradated. A person passes into states of drunkenness in gradual or imperceptible degrees. The smaller, first round would serve as a necessary element in moving the patron towards that state. Death, on the other hand, is not a matter of degree. Its all-or-nothing nature means that a smaller, insufficient factor will be an unnecessary attending circumstance where death is succeeded by a larger, independently sufficient injuring force. The first round is, thus, an unnecessary part of the set of circumstances which caused the death and is neither a \textit{sine qua non} nor NESS cause of the sequence.

\textbf{Omissions}

Omissions raise a particular challenge for \textit{sine qua non} causation. Even when the causal status of an omission seems intuitively clear, in any particular instance an innumerable number of other factors might have been capable of preventing the loss or injury suffered. Take the example referenced above. A garage does not repair the brakes on a car as required. The driver of the car approaches an intersection but omits to use the brake pedal. She strikes the car ahead of her. From a non-legal or mechanical point of view, describing either party’s omission as a cause is problematic. The car was propelled to the scene of the accident by fuel and by its engine. It collided with the vehicle ahead as a result of this force. It is certainly possible to state that the collision would not have occurred if the brakes had
been operable and had been applied. However, the collision also would not have occurred if the driver diverted the vehicle up a runway truck ramp or if she simply didn’t bother to drive that day, or if the vehicle was struck by lighting or was slowed to a halt by maple syrup. The number of things which didn’t but might have occurred to stop the cars from colliding is limitless. They are, on the other hand, entirely speculative. It is, rather, the duties which bear on the occasion that make the omissions visible as causes. These duties exist socially. They are not a physical part of the sequence of events. If the driver had no duty to stop, her failure to do so would not be seen a “cause” of the accident—or would only be a “cause” in the most arbitrary and speculative sense.\textsuperscript{43}

On the other hand, once a legal duty is established, an omission can be analyzed much in the same way as factual causes. An omission tends to have a location in time, much like a physical factor, and its causal significance can be similarly analyzed in relation to the rest of a factual sequence. Suppose parents owe a duty to ensure that their children are safely fastened to their car seats. If a parent omits to strap his child into a car seat, is subsequently involved in an accident and the child is injured, we can ask “but for the parent’s omission would the child have been injured?”

The NESS test does not assist in sorting out causal problems involving omissions. Where an incident occurs and there are multiple concurrently operating omissions, the NESS test is unnecessary. If any of the omitted preventative acts were performed in the circumstances, the accident would not have occurred. The omissions were \textit{sine qua non} necessary to the occurrence. Suppose both of the child’s parents had an independent legal duty to ensure the child was strapped into the car seat. Had either parent strapped the child in, the child would have been protected. Both (temporally concurrent and independently sufficient) omissions are thus \textit{sine qua non} causes.

\textbf{Conclusion}

This paper has argued that:

The NESS test provides a useful tool for sorting out causation issues where:
- an event is described broadly such that there are multiple sufficient causes;
- these causes operate concurrently; and
- the causes form an indivisible injuring force or inflict an indivisible injury such as the breach of a threshold.

The NESS test does not add anything to a \textit{sine qua non} analysis where:
- only one of the causes is sufficient (situations of \textit{asymmetrical overdetermination});
- the injuring forces operate consecutively (situations of \textit{preemptive causation});
- a \textit{rich description} of the \textit{injuring force} or the \textit{injury} is employed such that all of the constituent factors become necessary to complete the description; or
- where there are omissions which are independently sufficient to cause the loss.

Both the \textit{sine qua non} and the NESS test provide relatively clear and, in most circumstances, easily and predictably applied analytical tools for assessing causation. They are not, however, suited to every purpose. Importantly, the \textit{sine qua non} test leads to the counterintuitive conclusion that a factor which, in itself, can cause a certain loss, does not play
a causative role if operating concurrently with another factor, equally able to do so. In such circumstances, the NESS test supports the intuition that both factors contribute to the loss. However, such circumstances only arise where losses are described in a suitable degree of generality. The detail in the description given to an injury affects whether problems of *overdetermination* arise and, thus, whether an NESS analysis is required.

As Wright suggests, plaintiffs generally do not need to prove the minute details of a loss, but rather, must show a chain of causation from the defendant’s conduct to a broadly defined legal injury. At some point, the degree of detail in the sequence of events is irrelevant to the cause of action. The pleadings formulate a particular kind of causal question. Depending on the degree of detail used to describe the loss, an NESS analysis may be needed. If the description of a loss is general, more than one factor may appear as sufficient to cause the loss and we may need to rely upon a sufficiency analysis. If the description of a loss is rich, a greater number of factors will be deemed necessary to produce the loss and we will be better served by a traditional *sine qua non* analysis. The relevance of NESS causation, as this paper has argued, depends entirely upon how we formulate our question. While Wright’s contribution to the literature is significant, his claim to have found a panacea to resolve “the causal issues in the problematic causation cases that have plagued tort scholars for centuries” is overstated.

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4 Wright, “Causation in Tort Law”, *supra* note 2 at 1788-1813; Wright, *Pruning, supra* note 2 at 1019.
5 Wright, “Causation in Tort Law”, *supra* note 2 at 1802.
6 *Ibid* at 1805.
7 Other authors have noted this point. See Becht and F Miller, *The Test of Factual Causation in Negligence and Strict Liability Cases*, at 18, quoted by R. Wright, “Causation in Tort Law”, *supra* note 2 at 1779; and J.L. Mackie, *The Cement of the Universe: A Study of Causation* (Oxford: Oxford University Press, 1974) at 44-6.
8 David Hume, *A Treatise of Human Nature* (Clarendon Press, 1888) at 167. Hume argued that in order to understand causal relationships we ought not to look to uncover something inherent to the properties of substances interacting in any particular occurrence or, in his words, the “power and necessity... in objects”.
9 Hume argued that, because the human mind has no way to interpret this “necessity” in objects, causal proofs are felt rather than found. The “experience” of causation, he suggests, is the most we can expect to discover about “causes” and represents the epistemic limits of causal inquiries. *Ibid* at 247.
10 While Mill spoke of an “invariable order of succession” and a “general uniformity of the course of nature”, his inductive method recognizes that a plurality of causes can produce a particular outcome, notwithstanding that a specific outcome may have specific antecedents in a particular instance. John Stuart Mill, *A System of Logic, Ratiocinative and Inductive*, (Oxford, Longmans, Greens & Co., 1884), bk ii, ch. X, §.
11 For example, Prosser and Keeton on the Law of Torts reads: “The defendant's conduct is a cause in fact of
the event if the event would not have occurred but for conduct; conversely, the defendant's conduct is not a cause of the event, if the event would have occurred without it." Prosser and Keeton on the Law of Torts § 41 (5th ed.) (West Group, 1984) at 266.


14 Suppose both bullets pierce a vital organ. This example is modified from the facts of Cook v. Lewis, [1951] S.C.R. 830 (S.C.C.) and Summers v. Tice (1948) 33 Cal. 2d 80. In Cook and Summers, however, the courts were unable to ascertain which of the bullets struck.

15 Wright, “Causation in Law”, supra note 2 at 1793. See, for example, Michie v. Great Lakes Steel Division National Steel Corporation 495 F2d 213 (6th cir. 1974)


18 Wright, “Causation in Law”, supra note 2 at 1782-4.

19 ibid.

20 In Wright's words, the "duplicative causation" cases. Supra, note 8 at 1791


23 Though, see dissenting opinion of Stapleton, supra note 21 at 180.

24 Michael Moore, “Causation and Responsibility” Social Philosophy and Policy 16:2 (1999) at 11. For a related example see Frye v. City of Detroit, 256 Mich. 466, 239 N.W. 886 (1932) where a pedestrian was hit by an automobile, thrown into the path of a street car, and then struck again. His widow was denied recovery as she could not establish which impact killed him.

25 A modified sine qua non test requires we consider an element's "but for" role only with respect to the specific occurrence—or, with respect to its role in the set of conditions actually operating at the time of the occurrence.

26 Mackie, supra note 7 at 46.

27 “Strict sufficiency”, Wright, Pruning, supra note 2 at 1020.

28 Becht and Miller similarly write respecting the fires example: “in minute detail, it would probably appear that the defendant's fire was a course, for the positions of the smoke, ashes, and some parts of the ruins might well have been caused by the defendant's fire.” In A. Becht and F Miller, supra note 7 at 18. See also, Cole, who argues that the degree of specificity in describing the "counterfactual" employed in a "but for" test affects the viability of the test. Where a highly specified counterfactual is employed, there is limited empirical basis to test the validity of the counterfactual assertion and the "but for" test becomes more speculative. "Windfall and Probability: A Study of 'Cause' in Negligence Law: Part I. Uses of Causal Language” California Law Review 52:3 (Aug 1964) 459.

29 Wright, Pruning, supra note 2 at 1025.

30 ibid.

31 Mackie's argument was that if the injury is specifically described, the volley of both bullets together represents the "but for" cause of the injury. Supra note 7 at 47; Wright, Pruning, supra note 2 at 1027. Wright makes the same argument in the article, “Causation in Tort Law” in response to a similar observation to Mackie's by Ronald Perkins, supra, note 2 at 1778.

32 Wright, Pruning, supra note 2 at 1027.

33 Anderson v. Minneapolis, St. P. & S. Ste. M. Ry. 146 Minn. 430, 179 N.W. 45 (1920); Kingston v. Chicago & NW Ry. (1927) 191 Wis. 610, 211 NW 913.

34 A. Becht and F Miller, supra note 7 at 26.

35 Wright, “Causation in Tort Law”, supra note 2 at 1779.

36 Michie v. Great Lakes Steel Division National Steel Corporation, 495 F.2d 213. 6 ERC 1444, 4 Envtl. L. Rep. 20324.
There is a need, here, however, to make an easily-glossed-over distinction between two types of uncertainty in cases which deal with multiple negligent parties. First, often there is a singular injury which clearly was the consequence of a single source, but the law is unable, due to the negligence of more than one party, to determine the responsible party. In such cases, there is an uncertainty as to the source of the injury. There are a number of famous examples: Two hunters go grouse hunting together knowing that are other hunters in the area. As some grouse fly into the air, both hunters simultaneously take a shot. A nearby hunter is shot in the face. It is clear that the victimized hunter was shot by one of the two. It is, however, impossible to determine who was responsible. This example is similar to the grouse example noted above except that in this example it is unclear which bullet struck the victim. In the above example (of causal overdetermination) both bullets strike the victim at the same time. The present example reflects the facts of Cook v. Lewis, [1951] S.C.R. 830 (S.C.C.); Summers v. Tice (1948) 33 Cal. 2D 80. As another example, a woman is negligently hit by a bus, which then flees the scene of the accident. There are two bus companies in town and it is, thus, clear, that one of the bus companies was vicariously liable for her injuries. It is, on the other hand, impossible to say which of the two was responsible. Smith v. Rapid Transit Inc. 317 Mass. 469 (1945). A number of drug manufacturers sell the same drug. The drug is later found to cause medical complications. In the circumstances, there is no real way for any party injured by the drug to identify which manufacturer produced the dose that he or she was injured by. Palsgraf v. Long Island Railroad Co., 162 N.E. 99 (N.Y. 1928). Notably, however, neither the “but for” nor the NESS test is equipped to deal with situations where an injury results from a single, albeit uncertain, source. If it is clear that one bullet struck the victim, but unclear which hunter was responsible, we cannot say with certainty that either bullet necessary or sufficient in the circumstances to have produced the loss. The bullet which struck the victim was both necessary and sufficient to produce the injury. The bullet which missed was neither necessary nor sufficient. These are not cases of causal overdetermination.

Ibid.
Wright, Pruning, supra note 2 at 1025.
Wright, “Causation in Tort Law”, supra note 2 at 1793.
Supra note 39.
The conflation of factual causation and policy has led some commentators to suggest that omissions are not properly referred to as causes at all. See, for example, Michael Moore, “Causation and Responsibility”, supra note 24 at 43.