Scope of Liability
The Vanishing Distinction between Negligence and Strict Liability‡

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Abstract

Duty of care cannot be used anymore as the touchstone to differentiate negligence from strict liability, because the scope of liability (traditionally called proximate causation) requirement replicates many of the former features. Indeed, under a negligence rule the marginal Hand formula is applied twice: first to assess whether the defendant did breach his or her duty of care, and, second, to delimit whether defendant´s behavior was a proximate cause of the harm suffered by the victim. But under a strict liability rule, the Hand formula question is applied only once when the proximate causation question is raised.

Traditional law and economics analysis has almost always taken normative questions raised by the causation requirement as given, which is a major flaw of mainstream models, because the centrality of the scope of liability or proximate causation requirement in real legal practice is disregarded if not simply expelled from the analysis.

Then, definining the subjective scope of liability, that is to say, the boundaries of the pool of potential defendants, is the basic policy decision in each an every liability rule. In the model presented in this paper, the government first chooses efficient scope of liability, and, second, given the scope of liability, the government decides liability rule and damages that guarantee efficient precaution.

In the final part of the article, most known scope of liability doctrines developed by both common law and civil law systems are described in order to show how large the common ground between negligene and strict liability can be.

Summary

"Causation endures."

James Henderson, Jr. and Aaron D. Twerski[1]

1. Scope of Liability (Proximate Causation) as the Common Ground of Negligence and Strict Liability Rules

1.1. Negligence and Strict Liability distinguished

Breach of a duty of care (or undue risk taking) distinguishes negligence from strict liability, causation of harm is common to both liability rules.

> SHAVELL (2004), 175: "Under the negligence rule, an injurer is liable to the victim only if the injurer was negligent, in the sense that his level of care was less than a minimum standard chosen by the courts. Under the rule of strict liability, an injurer is liable for having caused harm even if he was not negligent."[2]

In these definitions, duty of care and causation live well apart as if they belong in two different worlds. This paper claims that, in the real world of legal practice this is not the case because the causation requirement replicates many –if not most- of the duty of care components. Thus, the practical differences between the negligence and the strict liability rules are much less defined than those traditionally envisioned by Doctrinal and Law & Economics Analysis. In fact, the main remaining dissimilarity consists of the basic marginal Hand Rule question being asked once under a strict liability rule, but twice under a negligence rule.

One of the reasons why this point has not been raised before is, perhaps, historical. Ever since its foundation, the analytical approach to the Law of Torts (heralded by Guido CALABRESI[3] and by the path breaking articles of Richard A. POSNER[4] and John Prater

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[1] HENDERSON/TWERSKI (2000), 659.

[2] See also SHAVELL (2003), 182, 185. PROSSER (1984), 534: "[strict] liability (…) is imposed on an actor apart from either an intent to interfere with a legally protected interest without legal justification for doing so, or a breach of a duty to exercise reasonable care. This is often referred to as liability without fault". DOBBS, (2000), 941 "Strict liability is liability without fault. The defendant is subject to liability for conduct that amounts neither to negligence nor to any intentional tort." POSNER (2003), 177: "Strict tort liability means that someone who causes an accident is liable for the victim's damages even if the injury could not have been avoided by the exercise of due care." Doctrinal analysis tends to define strict liability in a negative way as opposed to negligence: Strict liability is liability without fault.

[3] CALABRESI (1961), (1965), (1967), (1975).

[4] POSNER (1972).

BROWN[5]) Law & Economics scholarship on liability rules has focused on precaution[6] (on care) disregarding causation. This may be the case because general models of precaution assume that care reflects causation and then, given harm, knowing who the injurer is and, consequently, who is to be sued, effectively takes a difficult factual inquiry, but it is not a normatively complex policy decision[7,8].

However identifying an injurer is not a simple quest. It is an essential and complex normative and exquisitely legal question to be painfully answered by dark (and controversial) causation doctrines that are, as everybody agrees, common to both liability rules.

Here we do not assume that the injurer can be taken for granted, but, perhaps the other way round, we think that almost everybody can be thought –albeit irrationally from an economic point of view- as such and that this is why causation doctrines have been created in order to rein liability in the same way as duty of care doctrines were: when the goal is to identify who the liable injurer is, both doctrinal constructs perform similar and therefore partially redundant tasks. The goal of this paper is to show that the duty of care requirement can no longer be used as the touchstone applied to liability rules in order to differentiate negligence from other liability rules, particularly, from strict liability. If instead, we focus on causation doctrines and we ask who has the least opportunity cost of avoiding an accident (or of insuring the risk), proximate causation doctrines or, as they

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[5] BROWN (1973).

[6] COOTER (1985).

[7] Contrast MICELI (2004), 59: "[I]ssues of causation are often central to the actual assignment of liability in tort law, yet the economic model of accidents to this point has not explicitly raised the issue of causation. COOTER (1987) has argued that this is because the economic model implicitly embodies a mathematical notion of causation through the functional relationship between precaution and expected damages: as a result additional notions of causation are unnecessary to achieve efficient incentives for care. Nevertheless, a positive theory of tort law needs to address the court´s use of causation principles in determining the scope of liability". The minimalist approach to causation of Law and Economics is paradigmatically incarnated in COOTER/ULEN´s handbook (2004), 315-316: "One person harms another when the variables that he or she controls lower the utility or production of someone else. (…) ´Cause´ in tort law typically involves an externality created by interdependent utility or production functions". Even more radically SHAVELL (2004), 251-252: "Is it necessary [under the negligence rule] to allow parties to escape liability when they are not the cause of losses in order for their incentives to be correct (as it is under strict liability)? [T]he answer is that there is no need to allow parties to escape liability for negligence if they do not cause losses, but optimal incentives are maintained even if they do escape liability if they do not cause losses. In other words, basic incentives to take due care are correct whether or not there is a causation requirement". But this is perhaps only because, as Shavell writes in footnote 34, the model of precaution assumes that "the socially desirable level of care implicitly reflects causation; care is socially valuable only to the degree that it can reduce accident loses in circumstances in which losses would otherwise result". Then, the remaining question is who, among all of us, are to be the subjects of the duty of care?

[8] See discussion by WRIGHT (1987) for a criticism of the economic approach to causation.

are now increasingly called, scope of liability doctrines emerge as the pillars of the Law of Torts.

Indeed, given that most proximate causation or scope of liability doctrines are routineously applied to *both* negligence and strict liability cases, boundaries between these two liability rules all but fade away. The main remaining difference as stated earlier, consists of the marginal Hand rule being applied twice, *ex post* under the negligence rule: first, when the scope of liability has to be determined, and, second, when it has to be ascertained whether the defendant did breach his or her duty of care. Instead, under strict liability, the marginal Hand rule is only applied once (and mostly *ex ante*) when the pool of potential defendants is set by the legislative branch, or it is given to the courts by well established case law and the rest of humankind is excluded from the pool. In this sense, the negligence rule is a mix or combination of a no liability rule (for those defendants who did not breach any duty of care) and a strict liability rule (for those ones who breached it)[9].

A pure strict liability rule implies one single application *ex ante* of the marginal Hand formula by which the outer perimeter of the thinkable defendants would be *a priori* delimited. Therefore the *ex post* judicial inquiry would be limited to the factual determination of the existence of harm and its cause in fact. When, under a nominal strict liability rule, the judicial quest -which always takes place *ex post*- is burdened with substantial and normative!) proximate causation questions, an element of the negligence rule will almost inevitably be smuggled into the strict liability territory[10].

As a matter of fact, pure strict liability (no fault) statutory compensation systems preempt *ex ante* negligence *and* causation analysis: injuries are compensated, but it is legally irrelevant who the real injurer is and whether he or she was negligent. As we shall see under Section 2.1, this is paradigmatically the case in workers compensation systems.

We focus our attention on the fact that proximate causation or scope of liability doctrines are the bridge that links strict liability and negligence. However, it is needless to say that there are some additional reasons that help explaining why the boundaries between both liability rules are fuzzier than it is generally acknowledged. We just mention now some of the most conspicuous ones, but readers can skip the following four subsections:

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[9] MICELI (2004), 41: "In a sense we can think of negligence as a combination of no liability and strict liability, where the two are separated by a ´threshold´ based on the injurer´s level of precaution". SHAVELL (2004), 230: "[T]here is an element of strict liability –of having to pay for harm done- associated with the use of the negligence rule".

[10] STAPLETON (2001), 941. CUPP (2002), 1085.

A) *Differences of degree between intent, gross negligence, simple negligence, slight negligence and strict liability*

At least, since Roman law (See, KASER (2002), 173-174) it has been known that negligence includes degrees: it can be slight, simple or gross. Slight negligence borders on strict liability; gross negligence with intentional torts[11]; and, in the middle, we find the archetypical simple negligence. There is an overlapping *continuum* along the five categories that can be more easily envisaged if instead of aiming at the duty of care feature of negligence we point to the unreasonable creation or increase of risk branch. Probability theory helps and quality dissolves well in quantity: this second way of characterizing negligence brings it closer to intention, because higher the *ex ante* probability of harm, greater the probability of an *ex post* appreciation of intention. If in trial evidence clearly shows that the probability of harm was high, then the defendant's conduct will be easily qualified as reckless -as grossly negligent, at least-. And if the probability was very high then we will enter in the realm of intentional harm. Then, the difference between negligence and intent is not one of kind but of degree. This closeness is still better perceived in conceptions of intention that focus more on knowledge than on (ill) will[12].

B) Objective negligence is closer to strict liability than to subjective fault

Similarly, traditional doctrinal analysis conceived negligence as an state of mind -as fault, precisely: the negligent defendant was clumsy when harming the victim but he did not cause the harm willingly or intentionally, that is to say, he neither knew that harm would necessarily flow from his conduct, nor -much less- wanted to cause it[13]. Instead of that, current legal doctrines emphasize that negligence ought to be conceived as a conduct –the state of mind being irrelevant in all cases not regarding injurers who are minors or incompetents. It is therefore said that the concept of negligence is an objective one. The role played or chosen by

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[11]In both cases, negligence can be defined as "*Negligence as risk.* The defendant must have breached his duty of care to the plaintiff. When the defendant owes a duty of reasonable care, the defendant breaches that duty by conduct that falls short of such care, that is, by conduct that is unreasonably risky. Juries, not judges, decide whether the defendant was negligent unless the question is too clear to permit different evaluations by reasonable people" and "*Negligence as breach of duty*. Sometimes jurists define negligence as a breach of duty of care. In this definition, you are not negligent, or at least not actionably negligent, if you were under no duty of care, no matter how unreasonably risky your conduct might be. Judges who define negligence as a breach of duty wrap the duty and the negligence issue together." (DOBBS (2000), 270).

[12] See Comment d) to the §1, Intent, Recklessness, and Negligence: definitions, Restatement (Third) of Torts: Liability for Physical Harm (Basic Principles) (Tentative Drafts) (Current through August 2003) Tentative Draft No 3, Chapter 6, Scope of Liability: "Intent requires that the actor desires the harm to occur, or knows that the harm is substantially certain to occur (…) in a typical negligence case harm is possibility but not a certainty." See HENDERSON/ TWERSKY (2001), 1133.

[13] The doctrine is paradigmatically expressed in *Brown v. Kendall* (60 Mass. 292 (1850)). Brown's dog and Kendall's dog were fighting. Kendall started beating the dogs with a stick to try to break up the fight. He hit Brown in the eye while raising the stick over his shoulder. Brown sued for assault and battery. According to the decision, if the act was unintentional, then the plaintiff can collect on an action only if the defendant acted without ordinarily care and the plaintiff acted with ordinary care.

the defendant is decisive but his or her state of mind is not: Sociology prevails over psychology. This way of characterizing negligence brings it also closer to strict liability.

C) Presumed negligence brings simple negligence closer to strict liability

Under negligence, the burden of proof of the defendant's breach of duty of care falls on the plaintiff. But, nowadays, breach is presumed in perhaps most of the fields of application of this tort and moreover, doctrines of negligence *per se* (negligence presumed if the defendant breached a duty established by statute) and *res ipsa loquitur* (negligence presumed from circumstances) perform a similar function[14].

D) In Civil Law jurisdictions causation and duty of care are the province of the courts

In most continental *Civil Law* jurisdictions cases are decided directly by the courts without the help of any jury. Career judges decide simultaneously about the causation and duty of care requirements and, therefore, a fluid transition between both easily follows. An example: as we shall see in Section 4, bilateral care can be doctrinally constructed either as a duty question or as a (proximate) causation inquiry without any meaningful differences in the final adjudication of the case[15].

As a second goal, this paper aims at unifying the traditional Common Law of Torts and the legislative and regulatory approaches to Accident Law: we think that the center of gravity for the Law of Torts should shift from the discussion about the duty of care requirement to the analysis of proximate causation (scope of liability) doctrines. If our attempt to focus on the common ground to negligence and strict liability is successful, then the regulatory approach could be seen under a new light: regulations typically combine negligence and strict liability rules, and courts and juries decide cases simultaneously applying Statutory Law and Common Law.

An integrated analysis of negligence and strict liability rules from a scope of liability standpoint that justifies the potential liability of a more or less well defined pool of defendants is a more encompassing and better explaining tool of the Law of Accidents

[14] "For example, in the best-known case, *Byrne v. Boadle* (2 H.&C. 722, 159 Eng. Rep. 299 (1863)), the plaintiff was hurt when a flour barrel fell from the defendant's premises. The plaintiff did not allege any specific act of negligence, but the court thought *res ipsa loquitur*, the thing speaks for itself. But suppose that, in contrast, the defendant's negligence had been identified: ha had negligently failed to inspect the ropes securing the barrel. Given a specific claim of negligence, the but-for test could be applied asking whether a reasonable inspection would have revealed that the ropes were dangerous. If the defect in the rope was hidden and would not have been discovered upon reasonable inspection, the plaintiff would have proved specific negligence but would have lost on the-but-for issue." (DOBBS, 2000, p. 419)

[15] In Spanish Law strict liability prevails in Public Law and negligence in Private Law, but actual differences between similar cases are low or inexistent: so iatrogenic injuries in medical malpractice cases are decided on the same path whether the patient was hurt in a public hospital or in a private clinic; similarly, school accidents cases are similarly adjudicated independently of whether they took place in a public or in a private school. See SALVADOR et al. (2003), 4-7.

than the traditional approach that separates Common Law of Torts from Statutory Tort Law.

Some of the conclusions we present in this paper have been well known for ages both by doctrinal and law and economics analysts of law, but formal models of liability rules remain attached to the received wisdom of the radical duality between negligence liability and strict liability (liability *without fault*) as if they were the two opposite sides of a coin, and they are not.

1.2. Negligence and Causation Distinguished

First, negligence as a conduct is easily distinguished from the actual causation of harm. The defendant's behavior is negligent if it breaches a duty of care and by doing so poses an unreasonable risk on others. However, no harm necessarily results from the defendant's unreasonable increase of risk conduct. Therefore, no cause of action derives from it, because no actual harm necessarily was caused. As mentioned earlier, the elements of a *prima facie* tort case are: breach of duty, causation and harm.

> *Summers v. Tice* (33 Cal. 2d 80, 199 P.2d 1), a famous California case illustrates well the distinction between unduly risky –negligent- conduct and causation: Two hunters trying to shoot a quail missed and one of the shots hit the plaintiff. Nobody knew which one, but for sure one and only one defendant hit the plaintiff. The plaintiff sued and won verdicts at trial against both defendants. A Spanish case decided by the Supreme Court, 1st Chamber, July 7th 1988, mirrors *Summers v. Tice*: one of two hunters –nobody knows which one- wounded the plaintiff and were joint and severally liable for damages: Under Spanish Hunting Act 1970, Section 33.5, all participants in a shooting party are jointly and severally liable if somebody is shot and the actual injurer is not identified.

Second, causation restricts negligence because the ´but-for´ test excludes liability for harms which would have occurred even if the defendant had observed his or her duty of care to the plaintiff.

> GRADY (1983), 799, famously gave the example: If according to the Hand rule the efficient height of a fence is 9 feet and the defendant did not build it, the breach of duty is clear, but the but-for test limits his liability only to injuries caused by balls which fly under 9 feet[16].

Third, the breach of the duty of care as one of the basic elements of negligence overlaps with the causation element because the latter encompasses many of the attributes of former as we will develop in the next pages.

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[16] See also KAHAN (1989), 427.

1.3. Cause in Fact: A Cause Too Many

When analyzing causation, doctrinal analysis usually[17] distinguishes 'Cause in Fact' and 'Proximate Causation', the latter more recently christened as 'Scope of Liability'[18]. Cause in fact is determined through the 'but-for' test: the defendant's conduct is a cause of the event if it would not have occurred *but for* the defendant's conduct. Conversely, the defendant's conduct is not a cause of the event if the event would have occurred without it.

> PROSSER (1984), 265: "An act or an omission is not regarded as a cause of an event if the particular event would not have occurred without it."

It has always been well known that the 'but-for' test has many flaws. The first and most important is its wide content: Cause in fact cannot be a workable test because there are ordinarily too many causes, that is to say, any thinkable harm is always preceded by a potentially infinite number of events. If one of them was missing, harm would have not occurred.

> As José Antonio DÍAZ and Ulises MOULINES (1997), 146, two philosophers of science, write, "usually, events have multiple causes... the total cause of any event 'e' is the sum ... of all events c_1, c_2... c_n for c_i (1 = i = n) when it is the case that had not c_i taken place and *ceteris paribus*, then 'e' had not occurred."
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> "The problem is that", write FUMERTON/KRESS (2001), 98, "to get a set of conditions that is genuinely lawfully *sufficient* for some outcome, the set must contain indefinitely many conditions."
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> As PROSSER (1950), 369, wrote, "[i]n a philosophical sense, the consequences of an act go forward to eternity, and the causes of any event go back to the down of human events and beyond. (...) As a practical matter, legal responsibility must be limited to those causes which are so closely connected with the result and of such significance that the law is justified in imposing liability. Some boundary must be said too liability for the consequences of any act, upon the basis of some social idea of justice or policy."

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[17] But not always: contrast CALABRESI (1975), 71 (where a triple distinction between causal link, *but for* cause and proximate cause is introduced), and HENDERSON/TWERSKI (2000), 664 (distinguishing between "but-for condition", and –in negligent cases- "proximate causation" and "result-within-the-risk").

[18] As DOBBS (2000), 443, explains, "Proximate cause rules (...) seek to determine the appropriate scope of a negligent defendant's liability. The central goal of the proximate cause requirement is to limit the defendant's liability to the kinds of harms he risked by his negligent conduct. Judicial decisions about proximate cause rules thus attempt to discern whether, in the particular case before the court, the harm that resulted from the defendant's negligence is so clearly outside the risks he created that it would be unjust or at least impractical to impose liability."

> More recently, James A. HENDERSON, Jr. (2002), 391: "But-for act causation is insufficient by itself because, without further limitations, it allows an unmanageable number of claims into the reparation system. Some further limitation, akin to the Proximate Causation limitation in fault-based liability is necessary".

Second, the 'but-for' requirement becomes very rough in many contexts: scientific theories are based on very diverse and complex systems of hypotheses and it is generally not possible to subject them to the misleading simplicity of the 'but-for' causation test.

> Issues considered to involve scientific matters often require expert interpretation of circumstantial evidence, or expert conclusions in lieu of circumstantial evidence. In *William Daubert, et al., Petitioners v. Merrell Dow Pharmaceuticals, Inc.*, (509 US 579 (1993)) the U. S. Supreme Court held that the" general acceptance" standard established by *Frye v. United States* (54 App. D. C. 46, 47; 293 F. 1013, 1014 (1923)) had been superseded by the Federal Rules of Evidence (Rule 702): testability, subjection to peer-review and publication, for scientific knowledge; and known or potential rate of error, for particular scientific technique.

Third, the 'but-for' test does not work at all in omission cases.

> There is no causation in omissions: in them liability follows to the defendant's breach of a duty to avoid causation of harm (MOSTERÍN 1987), 141; SALVADOR (2002), 12).

Fourth, in cases where two causes concur and jointly cause the harm but where none of them was a sufficient cause of it, the 'but-for' test is not conclusive

> As Dan DOBBS (2000), 414, states "When each of two or more causes would be sufficient, standing alone, to cause the plaintiff's harm, a literal and simple version of the but-for test holds that neither defendant's act is a cause of the harm."

All these flaws are somehow solved in practice through other means: first, proximate causation doctrines –instead of the cause-in-fact test - are used when determining causation. Second, in the scientific context, lawyers ask whether the scientific community has established a 'state of the art' in order to test hypotheses and conducts that have or may have caused harm. Third, in omission cases, lawyers and courts turn to hypothetical causality, which still bypasses the problem, does not solve it. In practice, it means that some class of potential defendants are identified by statute or by the courts as the subjects of a duty of care in order to protect plaintiffs from suffering harm.

1.4. Proximate Causation: the Common Ground to both Negligence and Strict Liability

Legal formalism (wrongly) conceived causation in law as the mirror image of causation in natural sciences. The distinction between breach of duty and causation was assumed

as self-evident because (it was thought) a chasm divided the realms of factual causation and legal duties.

After legal realism, it is generally acknowledged that causation doctrines include both factual inquiries and policy decisions[19]. Consequently current legal doctrines distinguish between the factual research about the causes of harm (cause in fact) and the normative decisions about who has to be held liable for the harm caused (proximate causation or scope of liability).

> "Once it is established that the defendant's conduct has in fact been one of the causes of the plaintiff's injury", proximate causation doctrines seek to respond the question "whether the defendant should be legally responsible for the injury" and the answers are drafted "in terms of legal policy" (PROSSER (1984), 272-273).

The main purpose served by scope of liability doctrines is to avoid infinite liability, which would certainly arise if unrestrained cause in fact principles applied.[20]

> "Proximate cause rules are among those rules that seek to determine the appropriate scope of a negligent defendant's liability. The central goal of the proximate cause requirement is to limit the defendant's liability to the kinds of harms he risked by his negligent conduct." (DOBBS (2000), 443).

In the past two main tools used to cut the infinite chain of causation were remoteness and unforeseeability. In order to establish a *legal* cause, the defendant's conduct should not be either too distantly related to the harm suffered by the victim, or should be such that the result could not be probably anticipated by the defendant himself.

> The oldest and more general answer to this question was nebulous and therefore vague, again unworkable as a test: The defendant's behavior should not be too remote, indirect or far-off cause of the victim's harm. A subjective version of this doctrine is that a negligent defendant's conduct is *"not a proximate cause of, a not liable for injuries that work unforeseeable"* (DOBBS, 2000, p. 444).

Notice that if proximate causation was to be reduced to foreseeability, then it might only apply to negligence, but at present proximate causation doctrines include, besides unforeseeability and remoteness, many other different policy reasons that limit liability

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[19] See, W. S. MALONE (1956).

[20] Epstein´s casebook begins the Section of Proximate Causation with a rather famous –and fastidious- quote of The Elements of the Common Laws of England of Francis Bacon: *"Reg. I. In jure non remota causa sed proxima spectatur.* If were infinite for the law to judge the causes, and their impulsions one of another; therefore if contenteh itself with the immediate cause, and judgeth of acts by that, without looking to any further degree." *Apud* EPSTEIN (2004), 435.

for different reasons: the Foresight (or Harm-Within-the-Risk) Test, General Life Risks, Bilateral Care, Breach of Statutory Duties, Consent of the Victim and Assumption of Risk.

Under Paragraph 4 we summarize these policy principles in the way they have been developed by Common Law and Civil Law jurisdictions to rein crushing liability of a potentially quasi infinite number of defendants.

It has to be emphasized that, perhaps except for unforeseeability, scope of liability or proximate causation doctrines are routineously applied both to negligence *and* to strict liability in order to delimit the boundaries of liability.

> ABRAHAM (2002), 171-172: "[T]here is only strict liability if engaging in the relevant activity is not only the cause in fact, but also the proximate cause of the harm the plaintiff suffered".
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> Title of the Chapter 6, Section C of the influential Richard EPSTEIN´s casebook on Torts reads: "Proximate Cause (Herein of Duty) (EPSTEIN (2004), 435.)[21].

The forthcoming *Restatement (Third) of Torts: Liability for Physical Harm (Basic Principles) (Tentative Drafts) (Current through August 2003) Tentative Draft No 3, Chapter 6, Scope of Liability*, expressly decouples legal cause: it deals with factual cause (cause in fact) and scope of liability (proximate causation) separately. In doing so, the Restatement differentiates the historical and empirical questions of factual causes from the normative or evaluative questions of scope of liability. The former are best answered by the state of art in each and every scientific and technological field relevant to explain the harmful event. The latter are answered, either directly by statutory law, which determines the scope of liability or the extent of the duty of care, or by the factfinder assessing it step by step in each case:

Section 29 reads:

> "An actor is not liable for harm different from the harms whose risks made the actor's conduct tortuous".
>
> Comment f):
>
> "Separate treatment of proximate-cause issues in the statement of the elements of a cause for negligence (…) and in the legal cause (…) led many courts to fail to appreciate the existence of the former limitation, especially for negligence claims. In part, this is the result of the overlap between duty limitations and proximate cause, which emerged in the contending opinions of Judges Cardozo and Andrews in *Palsgraf v. Long Island Railroad Co.* (162 N. E. 99 (N.Y. 1928))" (…) "The Restatement Second of Torts is ambiguous about whether the requirement that the

[21] Contrast HENDERSON / TWERSKI (2000), 664 (confining proximate causation to negligence cases).

harm be within the scope of the risk is a duty requirement or a proximate-cause requirement."[22]

Comment g):

"The First and Second Restatement of Torts were influenced by causal thinking that has long been repudiated. This Restatement, by contrast, treats factual cause and scope of liability separately for several reasons. The most important is that decoupling the two concepts permits the court and factfinder to focus on the issue that is truly in dispute without having to invoke a doctrine that is not in dispute. Even when both issues are in dispute, clearly differentiating the predominately historical question of factual cause from the evaluative question of scope of liability makes for a clearer, more focused analysis. Finally, separation enables courts to employ instructions that avoid causal language when explaining scope-of-liability limitations to the jury."

Similarly, treatises and casebooks on the Law of Torts deal with scope of liability twice: first, when explaining the extent of duty of care in negligence; and second, when handling proximate causation.

A classic presentation can be read at FLEMING, (1998), 150: "The duty concept has been reproached as otiose, an unnecessary fifth wheel on the coach, as just duplicating the function of 'standard of care' and 'remoteness of damage'. Foreseeability of injury admittedly plays a role in 'duty' as well as 'breach of duty' but while being a necessary element of 'duty' it is not a sufficient one. Again, to be sure, 'remoteness' could have sufficed (and for a good while did) for the task of marking the outer perimeter of liability."

MICELI (2004), 62: "[T]he test in proximate causation becomes identical to the marginal Hand test. This suggests that the two inquiries –breach of duty and proximate cause- are essentially redundant."[23]

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[22] Section 29 of the Restatement applies not only to common law negligence, but also to negligence per se and strict liability: see WELLS (2003), 421). For a critique of the Restatement's proposals, see CUPP (2002), 1085.

[23] Thomas J. MICELI, when analyzing the General Transaction Structure, distinguishes between the "producer" of the external harm, and the "recipient" of the harm: "The producer is the physical cause of the harm (…), and the recipient is the bearer of the harm (…). We use these terms because (…) the terms *injurer* and *victim* connote a particular assignment of the right" (MICELI (2004), 181-182). Talking about injurers and victims involves talking about *rights* and *duties*. The whole quote is a confession: The idea of duty pollutes the model, and the sanitized concepts of producer and recipient are perhaps not extremely useful, but most probably incapable to do any decent legal job in real practice. Indeed causal relativism follows the assignment of the basic entitlement: tort liability models assume a pigouvian –precoasean- view of causation (of externalities) because they take for granted that there is a unique cause of harm – that there is an injurer -. But, as Coase showed, both parties are "simultaneously causes of the harm" because they happen to be there, at the same place and time when their interaction results in harm for one or both of them. See MICELI (2004), 168-171.

Accordingly we think, there is a common range between the negligence and the strict liability rule. In fact, if we graph a straight line between no liability and absolute liability or prohibition of activity, negligence occupies much of the common range to no liability and then to strict liability.

Nevertheless, the partial coincidence between the problematic of duty of care and scope of liability should not blind us to at least one remarkable difference in legal procedure. While duty of care issues are determined by the judge, proximate causation ones are usually established by the jury.

> Comment e) of the Restatement (Third) of Torts: Liability for Physical Harm:
>
> "One significant difference between these two doctrines is helpful in determining their appropriate spheres of application. Duty is a question of law for the court (...) while scope of liability, although very much an evaluative matter is treated as a question of fact for the fact finder. Hence, duty is a preferable means for addressing limits on liability when those limitations are clear, are based on relatively bright lines, are of general application, do not usually require resort to disputed facts in a case, implicated policy concerns that apply to a class of cases that may not be fully appreciated by a jury deciding a specific case, and are employed in cases in which early resolution of liability is particularly desirable. Duty is usefully employed when a court seeks to make a telling pronouncement about when actors may or, on the other hand, may not, be held liable. (...) On the other hand, when the limits imposed require careful attention to the specific facts of a case, and difficult often amorphous evaluative judgements for which modest differences in the factual circumstances may change the outcome, scope of liability is a more flexible and preferable device for placing limits on liability."

But, arguably, the Restatement's Bright Lines and the General-Application Test seem to be rough tools to distinguish between duty and scope of liability. Perhaps it is more a confession than a workable test.

2. Defining the subjective Scope of Liability as the basic decision in each and every Liability Rule

2.1. In Negligence the marginal Hand formula is applied twice, ex ante and ex post; in Strict Liability it is applied only once and ex ante.

Under the negligence rule, we ask whether the defendant A) did cause the harm suffered by the victim, and B) did breach his or her duty of care, this duty being delimited by the marginal Hand formula. Under the strict liability rule, we only raise the first question. In both cases, we ask further whether Ci) all proximate causation doctrines (in negligence) or Cii) all but foreseeability (in strict liability) include the defendant within the scope of liability.

From an economic perspective, scope of liability doctrines are proxies of cost-benefit analysis which, in its turn, is a development of the marginal Hand formula. Thus, under normative economic analysis of law, questions Ci) and Cii) can be easily reformulated as inquiries about the application of the marginal Hand formula to the facts of the case and to the individuals and organizations causally involved in them. **An economically sound scope of liability should include those social agents with the lowest opportunity cost to prevent the accident**. Were this constraint systematically disregarded, negligence and strict liability would become a ruinous ordeal.

Scope of liability doctrines so understood encompass actions and omissions, but are particularly at work with the latter: as far as an actual cause in fact does not exist in omissions, **the law has to resort to scope of liability to delimit the outer perimeter of the pool of potential defendants**. To this effect, the law always imposes a duty of care to such and such subjects, but not on all causal agents involved in the production of harm: the whole humankind is not obliged under any universal Good Samaritan rule. Without proximate causation criteria universal liability would prevail.

Under a negligence rule courts and juries decide *ex post* whether the defendant did cause harm (cause in fact), whether he or she has to be or not to be included within the scope of liability (a quest which implies a first application of the marginal Hand formula), and whether he or she did breach a duty of care to the plaintiff (second application of the marginal Hand formula). In common practice, the two quests are merged in one and foreseeability (the archetypal proximate causation doctrine) is more or less a synonym of duty of care.

> FLEMING (1998), 151: "The classical pronouncement of a general formula for "duty" is Lord Atkins' apodictic "neighbour test" in *Donoghue v. Stevenson* (1932, AC 562 at 580): 'There must be, and is, some general conception of relations giving rise to a duty of care, of which the particular cases found in the books are but instances … The rule that you are to love your neighbour becomes in law you must not injure your neighbour; and the lawyer's question, Who is my neighbour? receives a restricted reply. You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbour. Who, then, in law, is my neighbour? The answer seems to be persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplations as being so affected when I am directing my mind to the acts or omissions which are called in question.'"

As positive law and economics emphasizes, this way of ascertaining liability is always expensive, and sometimes it is unaffordable. This problem can be bypassed shifting the burden of proving negligence or its absence from the plaintiff to the defendant (*presumed negligence*). However, this solution does not necessarily save many litigation costs even though defendants will generally be better informed about the consequences of their conducts than plaintiffs.

A second and more cost-effective solution is to switch from negligence to strict liability, given that under the latter, the marginal Hand formula quest is eased by *ex ante* statutory law or by a settled common law categorization of the pool of potential defendants. Then, the second marginal Hand formula quest is quietly removed.

But the shift does not mean that the task of ascertaining compliance with the marginal Hand rule evaporates. We have just written that it is only eased or alleviated. In most strict liability cases the test is applied in the moment prior to the causation of harm given that it is then when the law isolates the pool of potential injurers and identifies them as those who *ex ante* have the *lowest opportunity cost* of avoiding the accident or the cheapest insurers. The most fundamental question of the Law of Torts is not anymore whether an injurer has to be held liable for the harm suffered by the victim, but **who the potential injurers are to be, and consequently how large the potential pool of defendants has to be**.

Then, the choice between negligence and strict liability turns out to be more about two different ways of applying the marginal Hand rule than about deciding whether to apply it or not.

Under negligence, the Hand formula is applied when defining the pool of potential injurers and, second, the formula is used again when trying to identify which injurer, if any, under the concrete circumstances of the case, was negligent. Under strict liability, we usually apply the marginal Hand rule only once and, usually, *ex ante* to delimit the pool of the potential defendants. Then, from a normative point of view, the liability question is settled: only the empirical inquiry about the reality of harm and its cause in fact remain to be solved.

If, as we have explained in Section 1.1, under a nominal strict liability rule, the jury's task - which always takes place *ex post* - is fraught with substantial proximate causation questions, an element of the negligence rule will be almost inexorably brought in the province of strict liability. This is most likely one of the main reasons why distinguishing between duty as a question of law for the court and scope of liability as a question of fact for the fact finder is extremely difficult.

And as we mentioned earlier, real strict liability statutory compensation systems tend to preempt *ex ante* judiciary scrutiny of both causation and negligence common law requirements: compensation is due for injuries "arising out and in the course of employment", and then only questions about "where" and "when the accident took place" might be raised. However, any question regarding causation of the harm or whether the injurer was negligent or not are not analyzed. For us, the reason for

eliminating *both* requirements is crystal clear: (proximate) causation is a route of escape for negligence considerations. In real strict liability proximate causation is a bridge to be burned.

> Richard EPSTEIN (2004), 879 gives us an elegant synthesis:
>
> "Yet the words ´liability without fault´ in the context of workers´ compensation set up a new system that differs much from common law strict liability as it does from common law negligence. (…) The modern workers´ compensation law imposes upon employers' liability for injuries (…) ´arising out and in the course of employment´. That test for compensation largely eliminates the requirement of a causal nexus between defendant's (particular) acts and the plaintiff's harm that is so central to the traditional common law theory of strict liability. Thus, with common law strict liability for damage caused by fire, the plaintiff must demonstrate that the defendant, or perhaps his guests or servants, set the fire in question. (…) The workers´ compensation scheme (…) focuses on the injuries to the worker. The emphasis is on where and when the worker suffered the harm by fire –it is no importance whether or not the employer or a fellow employee set the fire. **´Liability without fault´ in the context of workers´ compensation means not only liability without defendant's negligence, but also liability without the causal connection to defendant's conduct required under strict liability rules"** (emphasis added).

2.2. The control of the degree of care and of the level of activity and the difference between negligence and strict liability

Law and Economics models point to the fact that the negligence rule works fairly well to check the qualitative aspects of a behavior such as the level of care adopted, but that it is useless to control the quantitative aspects of a conduct, that is to say, the level of activity. Instead, it is assumed that this second task is well accomplished by a strict liability rule.

> Steven SHAVELL (1980), 5: "injurers will be led to take optimal care under the negligence rule, assuming that the level of due care is chosen by courts to equal the optimal level of care. Because they will take due care, however, injurers will escape liability for any accident losses they cause. They will therefore not have a reason to consider the effect that engaging in their activity has on accident losses. Consequently, injurers will be led to choose excessive activity levels."

Traditional Law and Economics models of negligence and strict liability built in the 80s by some of the most distinguished Law and Economics scholars[24] concluded that a

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[24] SHAVELL (1980), 1-25 introduced the distinction between the level of activity and the levels of care. LANDES / POSNER (1987), 66: "The most interesting respect in which negligence and strict liability differ concerns the incentive to avoid accidents by reducing the level of an activity rather than by increasing the care with which the activity is conducted". In the same vein, SHAVELL (1987), 24: "Under both strict liability and the negligence rule injurers are led to take socially optimal levels of care, but under the negligence rule they engage in their activity to great an extent because, unlike under strict liability, they

negligence rule would monitor the degree of care but not the level of activity while a strict liability rule would control both.

This idea that negligence adequately controls degree of care[25], but only strict liability can deal with activity levels clearly follows from the models assumptions. Nevertheless, this article defends that those assumptions are unrealistic in many (if not in most) relevant cases and that, consequently, the models´ results are not useful for the legal practice.

In order to make our point, a distinction should be introduced between individual, self-contained human activities, on one side, and complex activities structured by organizations which work under division of labor principles, on the other side. Individual liability and enterprise liability mirror, albeit somewhat simplistically, this distinction.

2.2.1. Individual —and indivisible— human activities

Indeed, for each and every *individual* human activity its level belongs to the degree of care, and it is inextricably bound to it, because levels of activity can not be decoupled from care: in the long run, *restless* work is always careless. To any reasonable legislator, court or jury it would seem patently meaningless to qualify as correct the weary behavior of a fatigued or exhausted person who went on and on developing an activity hour after hour and without a pause, without any rest. Therefore, level of activity belongs to the duty of care for any individual human being.

> In Law and Economics, this is an old thesis that the best analysts have always known well. So, SHAVELL (2003), 181-182: "Suppose, as would be usual, that there is more than one dimension of an injurer's behavior that affects accident risks (…) In this situation, under strict liability an injurer would be led to choose optimal levels of *all* dimensions of care, because his goal would be to minimize his expected total costs. But under the negligence rule, an injurer would have a motive to choose optimal levels *only* of those dimensions of care that are incorporated in the due care standard. And in fact some dimensions of care will usually be omitted from the due care standard because of difficulties that courts would face in ascertaining them (…) or in determining proper behavior in respect to them."

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do not pay for the accident losses they cause", and recently SHAVELL (2004), 205: "As stressed in the analysis, the use of strict liability rather than negligence rules in areas of behavior where activities create high risks, despite the exercise of reasonable care, has the advantage of tending to reduce in a desirable way participation in these activities. This theoretical advantage seems consistent with reality in the sense that the impression given by the foregoing section is that the areas of activity covered by strict liability are *generally* more dangerous than those covered by negligence rules (certainly the reverse is not true)."

[25] On defining levels of care, see DARI-MATTIACCI (2003) and (2004).

2.2.2. Activities structured under division of labor principles

Instead, firms and other complex organizations structured under division of labor principles can take advantage of shift work. A foundry or a hospital can operate night and day because their employees shift work every several hours. Therefore, for those organizations, control of the correct level of activity can be easily detached from duty of care, and attached to the organizations themselves under a strict liability standard. Consequently, traditional negligence models, enterprise liability and strict liability work well for firms and for individuals who work for them[26], but not for those subjects who develop individual activities not organized under shift work principles.

Summarizing, from a normatively rational economic point of view, the law, when defining the boundaries of the scope of liability, should always be looking for who from the infinite potential defendants, has the lowest opportunity cost of avoiding the harm (*least-cost avoider*)[27] or, in cases where harm is unpreventable, for who is the cheapest risk manager: A pool of agents will not be considered potentially liable if, under the same set of circumstances, another agent or agents had a lower opportunity cost of avoiding or minimizing the same risk of harm. Deciding otherwise would mean disregarding the most basic rule of scope of liability, which is remoteness.

2.2.3. Strict liability and *ex ante* determination of the scope of liability

We should always expect an *ex ante* determination of the scope of liability when doing so is less costly than deferring the identification of the pool of defendants to courts -duty of care- and to the juries -proximate causation-. This is the case in the main fields in which a strict liability rule prevails. Indeed, strict liability is traditionally applied to three kinds of agents:

a) Individuals who develop abnormally dangerous activities (and, perhaps, activities of uncertain consequences, that is to say, highly hazardous activities).

   The best-known example is *Rylands v. Fletcher* (1865 3 H&C 774, 159 Eng. Rep. 737). Defendants were owners of a mill. In order to supply it with water they constructed a reservoir upon

[26] KORNHAUSER (1983), 1350: "… assignment of liability to the agent may be inadequate because most injuries result from a complicated combination of acts by various agents".

[27] SHAVELL, (2003), 189: "The notion of least-cost avoider applies in situations in which the risk of accidents will be eliminated if either injurers or victims take care. In such situations it is clearly wasteful for both injurers and victims to take care; rather, it is optimal for the type of parties who can prevent accidents at least cost –the least-cost avoiders- alone to take care."

nearby land. The plaintiff was working certain coal mines, under lands, close to but not adjoining the premises on which the reservoir was constructed. The defendants employed an engineer and contractors to plan and build the reservoir. The contractors, in excavating for the bed of the reservoir, came upon five long ago abandoned vertical shafts. The reservoir was completed and partly filled. Within days one of the shafts gave away and burst, letting water flow into the plaintiff's workings, flooding their mine. The House of Lords found that liability existed because the defendants put their land to a non-natural use.

Section 519, General Principle, of the Restatement (Second) of Torts (1977), states the most basic rule of classical strict liability and, immediately afterwards, enunciates the scope of liability "Harm-Within-The-Risk" doctrine which limits the former:

(1) One who carries on an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting form the activity, although he has exercised the utmost care to prevent the harm.

(2) This strict liability is limited to the kind of harm, the possibility of which makes the activity abnormally dangerous.

Similarly, see Section 20, Abnormally Dangerous Activities, of the Restatement (Third) of Torts: Liability for Physical Harm (Basic Principles) (Tent. Draft No. 1 2001):

(a) A defendant who carries on an abnormally dangerous activity is subject to strict liability for physical harm resulting from the activity.

(b) An activity is abnormally dangerous if:
  (1) the activity creates a foreseeable and highly significant risk of physical harm even when reasonable care is exercised by all actors; and
  (2) the activity is not a matter of common usage.

And it has to be kept in mind the, according to Section 29, an actor is not liable for harm different from the harm whose risks made the actor's conduct tortuous.

In those cases, judgments are always made "about *classes* of activities, such as drilling for oil, (…) or fumigation (…) and, more recently, gasoline storage"[28], which have been added to historical examples, such as blasting or dangerous animals. In all of them, an *ex ante* determination of the pool of defendants is easy, and most dangerous activities are, as a matter of fact, intensively regulated.

b) Principals whose activities are organized under division-of-labour principles.

Archetypical examples are products liability and enterprise liability.

[28] EPSTEIN (2004), 596 (emphasis in the original).

In manufacturing, strict liability is perhaps the only viable alternative, the only feasible way of deterring excessive level of activity without crushing the market economy: deferring to legislators or to courts and juries the determination of the optimal level of activity would be tantamount of economic implosion.

SHAVELL (2004), 211: "[I]f courts were to decide on permitted levels of production, they would have to determine and balance costs of production against consumer valuations. The courts problem, in other words, would be tantamount to that of devising production responsibilities in a centrally planned economy". Were not for this insurmountable obstacle, the negligence rule would work well: "The failing of the negligence rule results from an implicit assumption that the standard of behaviour for determining negligence is defined only in terms of the level of care (…). Were the negligence standard defined so as to include the activity level, injurers would make sure not to engage in their activity to an excessive extent in order to avoid a finding of negligence (…) To formulate a standard for the level of activity, courts would need to ascertain the character of the benefits that parties derive from their activities" (…) Establishing an individual's level of activity would require knowledge of what [the defendant] did in the past" (*ibidem*, p. 198).

But in the ordinary cases of individual human activities those difficulties are of lesser extent, and frequently it is easier to determine the level of activity than the degree of care: When did the watchman, the nurse or the physician start their work the fateful day of the accident? It is frequently easier to answer this question than to ascertain whether their respective degree of care, when the accident took place, was the appropriate. The basic assumption of the model of precaution (that the standard of behaviour for determining negligence has *always* to be defined only in terms of the level of care and *never* in function of the level of activity) is too simplistic.

A similar rationale probably applies to most cases of enterprise liability and to the working accidents compensation systems.

c) Agents who, in their social life, play elective, optional or chosen roles, usually, monitoring either level of activity or degree of care turned to be very costly.

This is the realm of presumed negligence:
"Courts say they adhere to the reasonable person standard of care but they attempt to create specific rules of conduct that they then declare to be the rule the reasonable person will always follow. One result in these cases is that the general standard is left behind and specific rules are put in its place." (DOBBS (2000), 309).

What about chosen professional roles such as physicians, lawyers or accountants, traditionally regulated under a negligence rule? Perhaps those roles relate to self-contained activities which can be easily detached from the organizations to whom the defendants belong (hospitals and law or accountancy firms) and,

perhaps too, services rendered by these professionals are customized enough to be evaluated individually on a case by case basis.

And what then about necessary individual or social roles shaped by activities which enable us to be active members of the community? Those are the activities "of common usage" of the Restatement and are excluded form strict liability: they shape our daily life and essentially define, the realm of negligence. None of us was asked not to be born as a child, and we should not be asked to choose not to grow old. In the same vein, many day-to-day activities should be quantitatively developed unchecked, at least in a free society, because social control of their level of activity would be intolerable (prohibitively costly). The negligence rule is the appropriate one to regulate this kind of activities.

3. A model of efficient Scope of Liability

Suppose the likelihood of a certain accident can be reduced if individuals $i=1,...,J$ take precaution, including the injurer or injurers (defendant or defendants), the victim or victims (plaintiff or plaintiffs), and third parties. The probability of the accident taking place is $p(x_1,x_2,...,x_J)$, and the social damage is given by H. The level of precaution of individual $i=1,2,...,J$ is x_i and the cost of precaution is given by $c_i\ x_i$, where c_i measures the individual opportunity cost of taking precaution. The probability of the accident taking place is decreasing in each level of precaution and satisfies the usual convexity assumptions. Finally, we order individuals i from the person with the lowest opportunity cost to the person with highest opportunity cost of taking precaution, $c_1<c_2<...<c_J$.

The model is a two-step setup:

(1) First, the government chooses efficient scope of liability. The scope of liability imposes a limit on the number of individuals potentially liable for the accident. Define T as the individual liable for the accident with the highest opportunity cost. Hence, individuals $i=1,...,T$ are potentially liable for the harm caused by the accident, whereas individuals $i=T+1,...,J$ are not liable.

(2) Second, given the scope of liability, the government decides liability rule and damages that guarantee efficient precaution.

For subgame perfection, we solve the game backwards. For a given T, we find efficient precaution and decide which liability rule and damages should be applied. Later, we move to the first stage of the game, and study efficient scope of liability.

3.1. Stage Two: Liability Rule and Efficient Precaution

The least avoidance cost principle says we should minimize the expected cost of accidents for a given T (number of potentially liable individuals):

$$p\ (\ x_1\ ,\ x_2\ ,...,\quad x_T\ )\ H\ \ +\ \sum_{i=1}^{T}\ c_i\ x_i$$

Solving for the first-order condition, the optimal solution should satisfy:

$$\frac{\partial p(.)}{\partial x_i} H + c_i \leq 0; i = 1,...,T$$

Generally speaking, the optimal level of precaution for each individual should satisfy the first-order condition in the equality, and is increasing with social damage H and decreasing with one's opportunity cost c_i.

In some cases, it could be that for some individual k and for all x_k,

$$-\frac{\partial p(.)}{\partial xk} H < c_k$$

The marginal benefit of precaution is always strictly less than the marginal cost, hence the optimal level of precaution for individual k is zero.

If all individuals $i=1,...,T$ are not very different in terms of ability to reduce the probability of accident, the individual with the lowest opportunity cost (individual *1*) should take the highest level of precaution whereas the individual with the highest opportunity cost (individual T) should take a lower level of precaution (eventually zero). This result can obviously be reversed if individual T is more capable of avoiding the accident than individual *1*.

The efficient levels of precaution can be described by $(x_1^*, x_2^*, ..., x_T^*)$. The literature on tort law has focused on different liability rules in order to generate the optimal individual incentives and therefore achieve efficient precaution (Steven SHAVELL, 1987; Thomas MICELI, 1997). There is a controversy concerning the ability of comparative and contributory negligence rules achieving efficient precaution (Robert COOTER and Thomas ULEN, 1986; Tai-Yeong CHANG, 1993; Oren BAR-GILL and Omri BEN-SHAHAR, 2003).

We consider two alternatives for purposes of discussing the optimal scope of liability: (i) an efficient liability rule exists and efficient precaution is achievable; (ii) an efficient liability rule does not exist and efficient precaution is not achievable.

3.2. Stage One: Scope of Liability

Given the solution at stage two of the game, the government should decide the efficient scope of liability. Optimal scope of liability will be *T* and not *T+1* if and only if the following condition is satisfied, that is, if expected cost is lower when *T* rather than *T+1* individuals are potentially liable:

$$p(x_1^*, x_2^*, ..., x_T^*; 0, ..., 0)H + \sum_{i=1}^{T} c_i x_i^* < p(x_1^{**}, x_2^{**}, ..., x_T^{**}, x_{T+1}^{**}; 0, ..., 0)H + \sum_{i=1}^{T+1} c_i x_i^{**}$$

Notice that the levels of precaution $x_1,...,x_T$ are not the same on both sides of the inequality in general. By adding one more individual to the set of potentially liable individuals, we would expect a reduction of precaution by all the other individuals. Rearranging the previous expression, we obtain:

$$\Delta p(.)H + \sum_{i=1}^{T} c_i \Delta x_i < c_{T+1} x_{T+1}^{**} \quad (1)$$

On the left-hand-side, we have the benefit from adding one more individual to the scope of liability. First, there is a reduction in the probability of an accident taking place. Second, we expect a reduction of the total cost of precaution borne by the first *T* individuals (given that they will reduce precaution if one more individual is potentially liable). On the right-hand-side, we have the cost from adding individual *T+1* to the set of liable individuals. Obviously, *T+1* should not be added if the benefit is less than the cost.

Efficient scope of liability is determined by three factors: (i) the opportunity cost of individual *T+1* (the higher is the opportunity cost, the less likely is that this individual should be liable); (ii) the effectiveness of precaution by *T+1* (the better is the position of *T+1* in order to avoid an accident, the more likely is that this individual should be liable); (iii) the strategic behavior by all other *T* individuals (the way individuals react to a new actor being added to the set of potentially liable individuals).

The government should run the exercise for all possible values for *T*, from *0,1,...,J* in order to determine the efficient scope of liability. There are four possible cases to be considered:

(i) *T=0* (no liability). Zero scope of liability is efficient if harm is relatively low given the opportunity costs of precaution, that is,

$$\Delta p(.)H < c_1 x_1$$

(ii) *T=1* (pure strict liability). Only one individual is liable will be efficient if harm is not very high given the opportunity costs of precaution,

$$c_1 x_1 < \Delta p(.)H < c_2 x_2 - c_1 \Delta x_1$$

Negligence is useless here because adding the victim does not provide cost effective precaution.

(iii) *1<T <J* (contributory or comparative negligence rules for a subset of individuals). It will be efficient if harm is reasonably high given the opportunity costs of precaution,

$$c_2 x_2 - c_1 \Delta x_1 < \Delta p(.)H < c_J x_J - \sum_{i=1}^{J-1} c_i \Delta x_i$$

(iv) *T=J* (universal liability). It will be efficient for extremely high levels of harm given the opportunity costs of precaution,

$$\Delta p(.)H > c_J x_J - \sum_{i=1}^{J-1} c_i \Delta x_i$$

If precaution is efficient for everyone, that is, when an efficient liability rule exists and efficient precaution is achievable, the scope of liability is necessarily *T=J* by construction. The reason of course is that everyone is potentially liable, but the efficient level of precaution for a subset of individuals is zero (those with low ability to reduce the probability of accident and high opportunity costs). There is no cost in defining a large scope of liability in the model and it is possible to get efficient precaution for all *J* individuals. This is broadly the framework used by the economic literature on torts (Steven SHAVELL, 1987; Thomas MICELI, 1997) and could be the reason why the scope of liability has not deserved more attention from economists.

However, if precaution is not efficient for everyone because an efficient liability rule does not exist or is not achievable (we have a second-best solution) due to imperfect information, immeasurable levels of activity, cognitive dissonance or liquidity constraints (judgment proof), then it could be that *T<J*. In other words, limiting the scope of liability becomes an issue if the first-best solution cannot be achievable. We can see immediately

that strict liability and negligence are not two alternative liability rules, but the outcome of efficiently defining the scope of liability.

3.3. Model with Adjudication Costs

Following William LANDES and Richard POSNER (1981), we should consider the administrative and judicial costs of determining liability, which we expect to be strictly increasing with the number of potentially liable individuals. Define liability costs as *L(T)* when *T* individuals are potentially liable, where *L(.)* is increasing in *T* and satisfies the usual convexity assumptions.

The condition for the efficient scope of liability is no longer (1) but:

$$\Delta p(.)(H + L(T)) + \sum_{i=1}^{T} c_i \Delta x_i < c_{T+1} x_{T+1}^{**} + p^{**}(.)\Delta L \quad (2)$$

Where *?L= L(T+1)-L(T)* and notice that administrative and judicial costs for determining liability are only borne if an accident takes place.

Adding one more person to the set of potentially liable individuals has two effects in terms of liability costs. On one hand, the probability of bearing such costs is eventually reduced (new term on the left-hand-side of (2)); on the other hand, liability costs are higher. For a large *T*, we should expect the reduction on the probability of accident to be less important than the increase on adjudicating costs, thus putting less weight on the left-hand-side and more weight on the right-hand-side of (2). Therefore, we would say that high costs of determining liability will restrict the efficient scope of liability.

4. Scope of Liability doctrines in the Civil Law and in the Common Law

In American Common Law, the *Restatement (Third) of Torts: Liability for Physical Harm (Basic Principles) (Tentative Drafts) (Current through August 2003) Tentative Draft No 3, Chapter 6, Scope of Liability*, has proposed a common category of scope of liability (proximate cause) to rationalize the limits of liability in both negligence and strict liability rules. According to the already mentioned § 29 ("An actor is not liable for harm different from the harms whose risks made the actor's conduct tortuous"), a Harm-Within-The-Risk test prevails. "The idea is", write the Reporters, "that an actor should be held liable

only for harm that was among the potential harms –the risks- that made the actor's conduct tortuous" (Comment d)[29].

For continental European Civil Law, different proximate causation (scope of liability) doctrines are analyzed under the headings of *Objektive Zurechnungslehre*, in Germany, *imputación objetiva*, in Spain, or *imputaçao objetiva* in Portugal[30]. Each and every item of the list has an Anglo-American pendant:

a) **Foresight Test** (*Adäquanztheorie, causalidad adecuada*): The defendant's conduct is relevant if and only if it is not improbable that any reasonable actor in the same circumstances would have foreseen it as a cause of harm. This scope of liability test traditionally applies to negligence but not to strict liability. Furthermore, it has been legendarily criticized as an unworkable tool: First, foreseeability can be defined either statistically as probability in a technical meaning, or commonsensical as likelihood in the same way as a lay juror would conceive it. Second, if the former is the case, probability can be understood objectively or subjectively. If the latter, it is more than doubtful that a precise meaning of likelihood exists.

   Anyway, as far as foreseeability defines the scope of a negligence rule as opposed to a strict liability one it can be defended that the latter has a substantive and independent role to make some agents liable for uncertain harms they contributed to create or to increase. Strict liability is then liability for unforeseeable or unquantifiable risks created or increased by the defendant. But the remnant scope of liability policies limit further strict liability even in those specific cases of liability for uncertain harm.

   > SpSct, 1st, April 1st 1997 Case: plaintiff assaulted and injured by a robber when withdrawing money from a cash dispenser in the defendant's bank branch whose lock was broken down. Court considered defendant's behavior too remote a cause of harm.

b) **General Life Risks** (*Erlaubte Risiken, riesgo permitido*): Life is inherently risky and many life risks are unmanageable without simultaneously making social life itself impossible. Thus, risks associated with the common and beneficial facts of ordinary life, but which are unavoidable without concurrently eradicating the

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[29] The Harm-Within-The-Risk test clarifies the Foreseeability Test. See ABRAHAM (2002), 120.

[30] See, Pablo SALVADOR (2002), 7-13. A standard reference in Europe is Günther JAKOBS (1993). All cases cited in the text were decided by the Spanish Supreme Court (SpSCt; the ordinal indicates the Court's Chamber: 1st, Private Law; 2nd, Criminal Law; 3rd, other Public and Administrative Law; 4th, Labor Law and Social Security).

activities themselves are permitted when harm compensation would be prohibitively expensive. (i. e. SpSct, 3d, October 29th 1998, plaintiff whose son dove from a dock and drowned in the sea sued unsuccessfully the State for failure to warn about the danger.)

c) **Bilateral Care** (*Vertrauensgrundsatz, principio de confianza*): Some accidents are only preventable by the defendant, because only the defendant's care is able to affect the existence or seriousness of the risk of harm (Unilateral Care). But life is richer than models and in social interactions, most risks of accident are at least to a point avoidable by the defendant *and* by the victim, that is to say, in most cases, the victim could have also done something to eliminate or to bring down the risk of suffering harm. A good rule to encourage a richer and happier life for everybody and the growing division of labor which this would make possible is to exclude any liability of those defendants which acted on the assumption that the potential victim would have taken due care (or at least would not have behaved foolishly) when interacting with them. As far as we know, even with nuances, a bilateral care defense is universally admitted in both negligence and strict liability rules by all jurisdictions. An additional reason to think of strict liability as an autonomous liability rule different from and superior to negligence has been somewhat overstated in the last one hundred years[31].

[31] Mainstream Law & Economics handbooks, doctrinal analysis treatises and casebooks begin the chapters on negligence and strict liability dealing with models of unilateral care and, afterwards, bilateral care models of contributory and comparative negligence and of strict liability with a defense of contributory negligence are, respectively, developed. This way of presentation is well justified for the sake of simplicity. But the models do not mirror reality: In real life, bilateral care is paramount. Indeed, in most cases arguably the victim's behavior could be considered relevant to the causation of harm. Doctrinal analysis defines 'Accident' in individual terms: according to Steven SHAVELL (1987). 6, 9-10, accidents are unilateral when "injurer's behavior will be assumed to affect accident risks, but victim's behavior will not. In other words, victims will have no role in the analysis." In the bilateral version of the model "it is assumed that victims as well as injurers can take care and thereby lower accident risks. The way in which injurers choose to behave may depend on the way victims behave, and conversely". Similarly, see MICELI (1997), 16-20. Standard models of efficient care in bilateral causation confront negligence with strict liability and usually conclude that the latter is a better solution than the former because strict liability rule makes feasible a double and simultaneous control of level of care and level of activity.
But the distinction is subsequently blurred when authors write that strict liability rule does not work well in bilateral care without a defense of contributory or comparative negligence. Therefore the outcome is that the duty of care is first expelled from the defendant's sphere of influence, but only to reenter into the victim's house. Unilateral care models assume that pure strict liability is superior to the negligence rule because the former controls degree of care and level of activity as well. We have already discussed this assumption *supra*. Now we focus only in the fact that, in bilateral care, there is not such rule as pure strict liability without a comparative negligence defense. If so, the common ground to negligence and strict liability due to proximate causation doctrines is increased by the indispensability of resorting to comparative negligence doctrines in bilateral care: we do not know of many fields of strict liability which do not include a defense of contributory negligence. Then, given that bilateral care is paramount in real life, these are two strong additional reasons to defend that liability rules are situated in a *continuum* between pure subjective liability for breach of a duty of care and strict liability for uncertain harms.

Here the reader might well think that we are smuggling the duty of care requirement into the proximate causation territory because, tautologically, bilateral care deals with care. If so, it is trivial to conclude that proximate causation doctrines and duty of care ones are entangled. Well, we didn't smuggle anything: Duty of care was already in the realm of proximate causation, because both are all but identical.

d) **Remoteness** (*Regressverbot und Garantenstellung, prohibición de regreso y posición de garante*): Remoteness is the objective side of proximate causation (being foreseeability its subjective side): Causes in fact are disregarded if too far off from the harmful event. But both sides of this moon are dark. Remoteness is as an unworkable test as foreseeability because without a context it is absolutely imprecise.

e) **Breach of Statutory Duties** (*Schutzbereich der Norm, ámbito de protección de la norma*): In some cases, the pool of potential defendants is determined by Statutory Law, e. g. the range of European Products Strict Liability Law reaches manufacturers *and* importers but not dealers, and in other cases, the Statutes list who are the potential defendants obliged, under a statutory duty of care, to protect potential victims. Under a negligence rule, statutorily defined scope of liability involves negligence *per se* (presumed negligence). Under strict liability (at least in some jurisdictions) the scope of strict liability is always and only statutorily defined[32]. As far as breach of statutory duties is common to both liability rules as a standard to determine the boundaries of liability, the distinction between both rules blurs.

f) **Victim's Consent** (*Einverständigung, consentimiento de la víctima, scienti et volenti non fit injuria*). Some torts, as it is typically the case in intentional torts, concern unwelcome interferences with a person or the property of a victim. Victim's consent in those cases is an obvious defense because it takes away one element (perhaps the basic one) of the tort. In other cases, the victim's consent to the defendant's creation or increase of a risk over the level of general life risks is accepted by the legal system, because the law itself leaves to them the decision of getting involved in such a risk. In a third group of cases, the victim's consent was characteristically used by courts to draw the boundaries of the defendant's duty of care (DOBBS (2000), 537).

g) **Assumption of Risk** (*Einwilligung und Handeln auf eigene Gefähr, asunción del riesgo*): In other cases the law does not defer to the actors any lawful decision about creation or increase of risks. So, two drivers of different cars in a highway

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[32] See, for German law of Torts, Dieter MEDICUS, (2003), 410.

may not decide to run a car race, but if they do and one of them is subsequently injured by the other, comparative negligence applies. In those contexts, courts frequently understand that the plaintiff has assumed the risk (DOBBS (2000), 534-535). This is done harmlessly if the reader keeps in mind that the basic difference between victim's consent and assumption of risk is that in the latter case, an inalienability rule applies to the property right put into risk.

5. Conclusions

According to the standard and well-established doctrinal analysis in the Law of Torts, the negligence rule (NR) and the strict liability rule (SLR) share that, under both rules the injurer causes harm to a third person. However, under the negligence rule, the injurer can only be hold liable if his harmful conduct has breached a duty of care. Indeed, Law & Economics models have taken for granted the adequacy of the distinction between breach of duty and causation when differentiating between both liability rules. Certainly in one sense, this distinction seems obvious because the breach of duty is an unreasonable conduct which creates or increases the risk of harm, and causation, defined with the rather dubious help of the "but-for" test, is the actual production of harm. However, in a second sense, naturalistic causation (cause of fact) is restricted by proximate causation (scope of liability) doctrines, which restate many -if not most- of the components of the duty of care requirement. In this second sense the drawn distinction between both liability rules does not hold water: well established proximate causation doctrines blur the distinction between causation and breach of duty, which happens to be a *continuum*.

This paper claims that, when designing a liability rule, the crucial decision is not choosing between negligence or strict liability, but rather identifying who the potential injurers might be. In other words, the fundamental decision is to determine the scope of liability and, consequently, the persons or entities potentially liable for the harm suffered by the victim. This task is usually done *ex ante* by statutory law or by well established case law. Furthering Steven SHAVELL'S analysis according to which the injurer's level of activity can be conceived as a dimension of care incorporated into the due care standard, this article emphasizes that this conclusion is true in most human individual activities but it does not hold in complex activities carried out within organizations - which work under principles of division of labor – as well as in situations where a statutory or judicial control of the defendants´ levels of activity would be economically meaningless. Consequently, under strict liability, many of the remnant legal questions that are raised under the negligence 'duty of care' requirement are established *ex ante* by the legislative branch or smuggled *ex post* to the proximate causation or scope of liability territory.

Our main thesis is that, both liability rules look for who, in real life, could be the cheapest cost avoider or, in the event of unavoidable accidents, the cheapest insurer. However, under a negligence rule the marginal Hand rule is applied twice –*ex ante* and *ex post*-, whereas under strict liability it is mostly applied *ex ante* and only once. Consequently, under pure statutory strict liability compensation systems –e. g., workers´compensation- tend to preempt judicial scrutiny of *both* causation and negligence requirements: the scope of liability is predetermined by law and, *ex post*, only questions about the existence, seriousness, time and place of harm can be raised.

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