Introduction

In a negligence suit the plaintiff must demonstrate that the defendant has acted, that the act is a breach of a duty the defendant owes the plaintiff, and that the plaintiff has suffered an injury by virtue of the transgression. The so-called prima facie case for negligence may be extremely difficult to establish where there are multiple tortfeasors (i.e., multiple defendants) and insufficient evidence to causally connect any particular tortfeasor’s breach of duty to the plaintiff’s injury. This difficulty is much like the one of apportioning liability when the plaintiff’s injury might have had a source independent of the defendant’s remiss behavior. In both cases the plaintiff has been injured as a result of a breach of duty owed, but he is unable to prove that the injury is the result of any particular tortfeasor’s transgression. These untoward circumstances have helped spur “reform” in tort law: the courts have been forced to apply traditional theories of liability in novel ways and to invent novel theories of liability to ensure compensation. One such theory, the so-called market-share liability theory, allows the injured plaintiff to recover from all possible tortfeasors in proportion to each tortfeasor’s degree of fault. What is troubling, however, is not that multiple tortfeasors may be held liable to the degree that is commensurate with their causal responsibility for the plaintiff’s injury but rather that the court determines the degree of fault in such cases according to the market share held by each defendant.
The market-share rule has been used in some product liability suits, and it has been suggested that it should enjoy extended use in medical malpractice suits. If the market-share theory should encounter troubles, then not only the suggested extension but its initial use might be questioned. In the course of this paper the market-share rule will be examined and possible problems noted.

The “Natural Cause” and “Unknown Defendant” Problems

In one product liability case the issue that concerned the California Supreme Court was the cancer-causing properties of diethylstilbestrol (DES) for the female children of women who ingested the drug. DES, a synthetic compound similar in certain respects to estrogen, was discovered in the late 1930s by British scientists. The drug was initially marketed by U.S. pharmaceutical manufacturers in 1941 with approval of the Food and Drug Administration (FDA) for treating menopausal symptoms, senile and gonorrheal vaginitis, excessive menstrual bleeding, and to suppress lactation. In 1942 it was noted in professional medical journals that DES might be effective in preventing miscarriages. By 1947, DES was marketed as a miscarriage prophylactic under trade names and generically; by the 1960s, DES was being sold by more than 200 companies. Although most manufacturers warned against DES use for women with cancer, they failed to warn about the possible risks of cancer appearing either in those women who took DES or their children. (It is doubtful that manufacturers knew whether DES could cross the placental barrier.)

In 1971 it was noted that a significant increase in clear cell adenocarcinoma among younger women (referred to as DES daughters) had appeared, but not among women of advanced age, as might be

2See Bushwood (1981).
4This was noted in the Morton decision.
5See Karnaky (1942).
6As discussed in Morton.
TORT REFORM

expected (Turner 1981, p. 309). By the end of 1971, the FDA required that manufacturers notify health care providers that DES was counterindicated for prevention of miscarriage. This required proscription came too late to prevent injuries—injuries that proved actionable. Thus far there have been more than 1,000 DES negligence suits; the number of potential plaintiffs may exceed 500,000 and may even reach 6 million.7

The problem for each plaintiff in such a tort suit is to demonstrate, by a preponderance of evidence, that the defendant is duty bound to the plaintiff and that the plaintiff has suffered a harm by virtue of the defendant’s breach of duty. In most DES suits, proof of the causal efficacy of a particular defendant’s breach is difficult to establish for two reasons, only one of which is considered by the courts to be significant. The first and less serious difficulty for the plaintiff in such a case is to show that her cancer was the causal result of taking DES. While there is a significant increase in the number of such cancers in the daughters of women who took DES, the cancer also occurs within the general female population. Statistical information may provide some grounds for an inference as to the causal responsibility of DES for adenocarcinoma. But if the cancer also occurs within the general population, then taking DES would not be the only cause of such cancers and perhaps not the cause in this particular instance. Indeed, a woman who has cancer may have it quite independently of taking DES. This would be true even if the incidence of such cancer is 10 times greater for those who took DES than those who did not. For the purpose of this paper, this problem shall be referred to as the “natural cause problem.”

The second and more serious difficulty occurs for those DES takers who purchased their drugs under generic names and where the chain of evidence leading to a specific manufacturer was lost. In one case it was observed that “three and a half years of discovery have revealed nothing that would indicate which, if any, of the defendants is the culpable party.”8 Under such conditions it is not questioned that some one defendant’s breach of duty caused the harm to the plaintiff. Rather, it is the identity of the responsible party that is at issue. It is possible that any one of 200 companies is responsible. Consequently, the problem shall be referred to as the “unknown defendant problem.”

Each problem is concerned with liability being attributed on the basis of the defendant’s breach without a causal nexus being dem-

7See, for example, the comments in the Wall Street Journal (23 December 1975, p. 1), New York Times (17 May 1977, p. 18), and Boston Sunday Globe (12 October 1980, p. 5).
8As noted in the Ryan decision.
onstrated between the breach and the plaintiff's harm. Since the causal relation between some one defendant's breach and the plaintiff's injury is known, it might be supposed that the impetus to address the plaintiff's claim is rather strong. This appears to be evidenced, however, not by the fervor with which such cases are adjudicated but rather the extent to which courts must go to ensure plaintiff compensation.

Rules for Adjudicating Tort Liability

The best-case scenario with each problem is that only the parties in breach and those causally responsible for the plaintiff's injury are held liable, while all those not in breach or not causally responsible are exonerated. A less than best-case scenario is the finding in favor of the plaintiff when the defendant is actually not in breach or not causally responsible (a false positive mistake) or the finding against the plaintiff when the defendant is in breach and causally responsible (a false negative mistake).9

While avoiding both false positive and false negative mistakes is recommended and indeed ideal, avoiding one mistake seems more obligatory than avoiding the other. Although a good rule for adjudicating tort liability would not permit the plaintiff's claims to be unjustly dismissed, it would seem essential that an acceptable rule would not in and of itself permit a defendant to be unjustly penalized. This would seem correct notwithstanding the fact that, unlike criminal cases, finding a defendant liable in a tort suit is not to find the defendant guilty of a punishable offense. Rather, the purpose of such suits is to restore the plaintiff to his original state. (Otherwise, we should not permit third-party payment on behalf of the defendant.)10

It might reasonably be argued, therefore, that in their respective domains, criminal law and civil law are alike in construing false positive mistakes as more of an anathema than false negative mistakes. This does not mean that false positive mistakes are not more vehemently disdained in criminal than in civil law. This may, in fact, be suggested by the use of the more stringent standard of proof in criminal law. The burden of proof used in criminal cases, namely, that defendant guilt must be established beyond a reasonable doubt, would surely render unlikely the commission of false positive mistakes. It is, after all, suspect that the statistical evidence used in the DES cases would place the defendant's responsibility beyond a

9For an excellent presentation of this problem, see Kaye (1982).
10This is argued persuasively by Thomson (1984).
reasonable doubt, and insofar as the defendant’s causal responsibility would not be established under such a standard of proof, the plaintiff would most likely lose.

However, the amount of evidence necessary for the plaintiff to win his suit under the preponderance of evidence standard is that the defendant merely be shown “more likely to have caused the harm than not.” This greatly increases the likelihood that the plaintiff will not be forced to suffer his injury without compensation, which would be the likely outcome from applying the beyond a reasonable doubt standard. Of course, the preponderance of evidence standard will also be subject to more false positive mistakes. It is not only logically but also empirically possible that a nonresponsible defendant be shown to be “more likely than not” responsible for the plaintiff’s harm. Nonetheless, it would not follow from this that civil law does not view false positive mistakes with more disdain than it views false negative ones. That is, the goals may be identical between criminal and civil law even though false positive mistakes are more protected against in criminal than in civil law.

The goal, therefore, is to present evidence that satisfies the accepted burden of proof, a burden designed to ensure that only the negligent or guilty individuals are held liable. Since the courts are per enforced to decide liability in cases like the DES case noted above, they must do so on the basis of available evidence while also endeavoring to avoid false positive mistakes. If the available evidence empirically establishes, in accordance with the preponderance of evidence standard, that the tortfeasor is more likely responsible than not, then it may be thought not an obvious travesty of justice to hold the tortfeasor liable.

It may, however, seem unfair to affix full liability to a given tortfeasor where the plaintiff’s harm may have been caused independently of defendant breach or where many defendants are in breach and there exists insufficient evidence to connect any given breach with the plaintiff’s harm. Thus, in an attempt to mitigate the injustice of affixing full liability in cases troubled by either or both difficulties, alternative theories of apportioning liability have been employed. Although it is logically consistent to distribute full liability on the basis of satisfying the preponderance of evidence standard in cases of multiple defendants (the standard of evidence after all determines what constitutes adequate evidence, not what liability rule will be employed on the basis of adequate evidence), it is not clear that a rule for distributing full liability in such cases is either fair or the best way to avoid false positive mistakes.
One means of assuaging the severity of such mistakes is to employ a rule of liability that would distribute liability only to the extent that the evidence would warrant. The so-called comparative liability rule would appear to preserve judicial disdain toward false positive mistakes in the face of circumstances that appear to cause such mistakes. The comparative liability rule differs from the several liability rule—which permits the plaintiff to collect the full award from any one of the multiple tortfeasors (leaving each tortfeasor to seek indemnity from the others)—and from the joint liability rule, which holds each defendant responsible for an equal share of the award. According to the comparative liability rule, tortfeasors are each held liable according to their respective degree of fault for the plaintiff’s harm.

In general the comparative liability rule does not obviate the requirement of showing a causal relation between defendant’s breach and the plaintiff’s harm. For example, most jurisdictions employ the notion of comparative negligence rather than the notion of contributory negligence. Both notions entail that the plaintiff in a negligence suit has suffered an injury as a result of the defendant’s breach but not only by virtue of the breach. In both cases, the plaintiff’s injury is partly the result of the plaintiff’s own negligence. Some jurisdictions, however, employ the idea of contributory negligence, in which the plaintiff is barred recovery upon a favorable finding of plaintiff negligence. In most jurisdictions the notion of comparative negligence allows the plaintiff to recover but only to the extent that the defendant’s breach can be shown responsible for the plaintiff’s harm. Comparative negligence then employs comparative liability to allow the negligent plaintiff to recover. Nevertheless, in such cases the plaintiff must present evidence as to the actual degree of defendant responsibility for the harm—that is, evidence as to the percent of the plaintiff’s harm that resulted from the defendant’s breach.

The comparative liability rule might, with respect to the natural causes problem, hold the defendant liable for a share of the plaintiff’s award commensurate with the likelihood of suffering the injury by

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11 The comparative liability rule is accepted in the majority of U.S. jurisdictions.
12 Both of these rules of liability were employed in Summers v. Tice, 33 Cal. 2d 80, 199 P.2d 1 (1949). In Summers a plaintiff was injured when two hunters, in breach of a duty of care, fired in his direction and injured him. Since only one defendant caused the harm and it could not be determined which one fired the shot that injured the plaintiff, both defendants were held jointly and severally liable (that is, liability apportioned to each individual for an equal share and liability apportioned to any one of several defendants, perhaps allowing for contribution from the other defendants). As both were in breach, the court reasoned that it would be unfair to deny the plaintiff a recovery simply because, through no fault of his own, he could not isolate the causally responsible defendant. The burden of presentation then shifted to each tortfeasor to extricate himself from responsibility.
virtue of the defendant’s breach (for example, in the DES case, ten times the adenocarcinoma cancer suffered in the general female population). Thus, the tortfeasor would be liable for that percent of the award which reflected the increased likelihood of injury associated with the tortfeasor’s product or behavior. With respect to the unknown defendant problem, the comparative liability rule might hold each defendant responsible for that share of the plaintiff’s award reflected in the proportionate fault each bears for the injury.

But how does one apportion liability according to the comparative liability rule in those cases where there is known negligence that results in plaintiff injury, but where the known malfeasance cannot be attributed to any one of the multiple defendants and each defendant is *equally likely* to have caused the injury but none is separately more likely than not? What shall be done in cases where the known malfeasance cannot be attributed to any one defendant and where all of the defendants, although likely, are not equally likely and none is more likely than not? (There are, of course, other permutations: for example, the DES case where the plaintiff’s injury is likely, but is not necessarily, caused by any one of the multiple defendants, each of whom is likely, but not equally likely, and none is more likely than not.)

The California court noted that the comparative liability rule may still be utilized to distribute liability but only insofar as dictated by the statistical evidence at hand. Each tortfeasor may be held liable for the portion of the plaintiff’s award that reflected the likelihood that the defendant’s breach caused the plaintiff’s injury, that is, according to the defendant’s market share of the offending product. With the so-called market-share liability rule, the defendants if found negligent, would be liable for that percentage of the plaintiff’s award determined by their respective share of the market.

**Problems with the Market-Share Rule**

Unfortunately, there are two significant problems with this approach. First, the comparative market-share liability rule, although more in accordance with the total number of cases taken as a *whole*, is less in accordance with the total number of cases taken as the *summation* of the individual cases. In other words, the individual tortfeasor’s breach is either responsible for the plaintiff’s injury or it is not. If the tortfeasor is responsible and the market-share rule is applied, then there obtains a partial false negative mistake, which is the difference between the percentage of the total award for which the responsible tortfeasor is held responsible and the total award. If the tortfeasor’s
breach is responsible for the plaintiff's injury and the market-share rule is applied, then there obtains a partial false positive mistake, which is the difference between the amount for which the innocent tortfeasor is held liable and zero. Whereas the several liability rule and the joint liability rule in a joint enterprise might result in a correct judgment in the individual case, the comparative market-share liability rule can, at best, only approximate such a judgment. This is notwithstanding the fact that the market-share liability rule is likely to have a better correspondence with available statistical evidence. Thus, probable responsibility cannot justify a finding of complete or partial liability; statistical information may surely evoke suspicion, but it cannot warrant an inference about individual responsibility or lack of such.

Second, the comparative market-share rule confuses the likelihood that the breach caused the plaintiff's injury with the likelihood of a causal relation between the breach and the plaintiff's injury. What is generally required in a negligence case is evidence of an empirical nature that connects a particular defendant to the contested malfeasance, misfeasance, or nonfeasance. Evidence that satisfies the beyond a reasonable doubt standard is evidence that substantially eliminates every other reasonable hypothesis that might be proffered to explain the facts. The preponderance of evidence standard, on the other hand, requires merely a relative weighing of the evidence. Such a standard would establish defendant liability on the basis of compiled empirical evidence that more than not connects the defendant's breach to the plaintiff's harm to an extent somewhat approximating, but obviously not reaching that required by the beyond a reasonable doubt standard. Thus, the preponderance of evidence standard is satisfied when evidence is produced demonstrating that the defendant's breach is "more likely than not" the cause of the plaintiff's harm.

The notion of "likely" employed in the market-share rule, however, merely requires evidence of the fact that the defendant's breach might have caused the plaintiff's harm. The rule requires evidence only to the extent that the defendant's breach is shown to have had the opportunity to harm the plaintiff, while the preponderance of evidence standard requires more or less good (but not conclusive) evidence establishing that the defendant's breach actually did cause the plaintiff's injury. On the other hand, the market-share rule of liability requires the establishment of only the opportunity to cause the plaintiff's injury; the more extensive the opportunity, the more extensive the liability. But the opportunity to wrongfully injure is merely necessary, not sufficient, for the injury. The advantageous
opportunity to act fails to establish the likely commission of the act, and producing evidence for the former is not tantamount to producing evidence for the latter. It does not, after all, require a prodigious imagination to fabricate a scenario wherein the empirical evidence incriminates the candidate with the least opportunity to commit the deed in question. To satisfy the preponderance of evidence standard, a preponderance of empirical evidence would need to be produced beyond that necessary to demonstrate the chance to act because, as was noted above, there is more to showing that a defendant is likely to have committed an act than showing merely his extent of opportunity.

In effect then, the use of the market-share liability rule acknowledges that each tortfeaster is in breach and that the plaintiff's injury is the result of one such breach. Consequently, other than the one tortfeaster whose breach actually caused the plaintiff's harm, every other tortfeaster is held liable merely for the breach plus the opportunity to cause the harm. A mere breach without a causal relation to the damage, however, is not actionable in negligence. That is, because the prima facie case for negligence entails a causal nexus between the breach of duty and the plaintiff's injury, the prima facie case has not been satisfied with the market-share rule. If the causality requirement of the prima facie case is to be in some sense preserved under the market-share rule, the opportunity to harm must be equated with the degree of causal responsibility. But neither the alternative of jettisoning the causal element nor the alternative of equating causal efficacy with opportunity would seem a welcomed one.

It might be thought that the market-share rule may be extricated from the above problems once it is realized that the rule merely shifts the burden to the defendants. After the plaintiff has demonstrated that he has suffered injury through the breach of duty by one of multiple tortfeasors, the burden shifts to each defendant to prove, by a preponderance of evidence, that he is not the responsible agent.

Unfortunately, such a consideration may very well be an instance of ignoratio elenchi. First, in certain jurisdictions the principle of res ipsa loquitur shifts the burden of presentation to the defendant, but that in itself would not entail that the defendant would be held liable merely on the grounds that he had the opportunity to harm the plaintiff. In other words, doctrines that shift the burden of presentation to the defendant require evidence of likely commission, not evidence of opportunity to commit. The principle of res ipsa loquitur is designed to address the issue of the unknown defendant on the basis of an

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13 In the majority of American jurisdictions res ipsa loquitur merely presents a permissible inference. A minority of courts has uniformly given res ipsa loquitur greater effect, namely, a rebuttable presumption. See Prosser (1971, pp. 228–38).
agent's control over the instrumentality that causes the plaintiff's injury after breach of duty has been established. The market-share rule is likewise designed to address the problem of the unknown defendant after a breach of duty has been established. The difference is that although both res ipsa loquitur and the market-share rule shift the burden to the defendant(s), only res ipsa loquitur does so on the basis of evidence connecting the particular agent with the plaintiff's harm. The market-share rule shifts the burden merely on the basis of the opportunity to cause the plaintiff's injury. Consequently, since both rules shift the burden to the defendant and the principle of res ipsa loquitur does not encounter the causal problems noted with the market-share rule, such causal problems cannot be the result of shifting the burden of presentation.

Second, the shift in the burden of presentation would appear to be just as easily accommodated by the several liability rule. If each defendant suffers the burden of defending against the charge of negligence, then except in those cases where the defendant could demonstrate partial responsibility only, each would be liable for the total award.

Conclusion

If the above problems are not mere fabrications, the plausible extension of the market-share rule might excite some concern. Besides litigation for other toxic substances, such as asbestos, Agent Orange, and toxic waste, it has been suggested that where a patient is harmed through the negligence of one or several health care professionals, all might be held liable according to the share each enjoys of the patient's economic expenditure.\(^4\) That is, each health care provider would be held liable for that portion of the plaintiff's award which corresponds to the percent of the practitioner's dollar value related to the dollar value for all the services provided by the sum of the defendants. This, it has been argued, is sensible since the fee each health care provider charges is alleged to correspond to the amount of responsibility each provider assumes for the patient's welfare.\(^5\)

\(^{14}\)Consider, for example, In re "Agent Orange" Product Liability Litigation, 635 F.2d 987 (2d Cir. 1980), cert. denied, 454 U.S. 1128 (1981). However, it is not known what rule was implemented in the out-of-court Agent Orange settlement. See Earley (1984a, 1984b) and Blumenthal (1984a, 1984b). It has been noted by the Rand Corporation that for each dollar spent by asbestos companies in litigation, 37 cents went to victims. The remainder was spent on attorneys and overhead. See Brown (1985).

\(^{15}\)See Bushwood (1981). Of course, the problem of finding for the harmed plaintiff even when the source of the negligence is unknown has, in some jurisdictions, been adjudicated under res ipsa loquitur. See Ybarra v. Spangard, 25 Cal.2d 486, 154 P.2d 687 (1944).
There are, of course, other problems with the market-share rule that are of some concern—for example, the problem of determining the appropriate “market” for use and the relationship between use of the market-share rule and tort reform. There are also many proposed alternatives to the present methods of legally negotiating product liability claims. Apart from these considerations, if the above has not proved apocryphal, it seems that what is troubling about the market-share rule is the problem of causality. If such a problem is to be eliminated, the market-share rule ought to be restricted to apportioning liability after it has been established by a preponderance of evidence that a given tortfeasor is only partially responsible for the plaintiff’s injury. If such a reform is not employed, civil adjudication may err excessively in the direction of false positive mistakes.

References

17The Uniform Product Liability Bill (S. 44), introduced by Senator Kasten in March 1984, would have altered what theories of tort liability are appropriate for the various claims against producers. The New Zealand system, castigated for removing all incentives for product safety in the absence of strict governmental regulation, abandoned tort litigation for all accidents in favor of a comprehensive, no-fault system.
16If the tortfeasor is shown to be fully responsible, the market-share rule would not apply.