RESOLVING THE DILEMMA OF NONJUSTICIABLE CAUSATION IN FAILURE-TO-WARN LITIGATION

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ABSTRACT

Failure-to-warn cases represent a significant portion of product liability law, yet the core concepts of this body of law are poorly developed. In particular, the standard tort requirement that the injured party demonstrate a causal connection between the defendant's violation of duty and the injury simply does not work in the vast majority of failure-to-warn cases. A substantial body of social science literature demonstrates that, in all but extreme cases, it is impossible for an injured party to demonstrate by a preponderance of the evidence—and thus for a court credibly to conclude—that the party would have acted differently had a warning been provided. Thus, a rigorous application of the causation requirement would result in defeat for most injured parties. Yet, some injuries certainly could be prevented by effective warnings, even if those beneficiaries cannot be easily identified. A legal system that denies recovery to virtually all injured parties because it cannot ascertain which parties' injuries would have been prevented undercompensates victims and underdeters dangerous practices by product manufacturers and distributors, and thus does not fulfill the

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goals of the tort system. Some courts and commentators have recognized this problem and have put forth a variety of mechanisms to resolve it. Those mechanisms—such as "heeding presumptions" and enterprise liability—suffer from the opposite problem: they compensate injured parties without regard for whether there is a causal connection between the lack of a warning and the injuries. The result is overcompensation of plaintiffs, overdeterrence of manufacturers, and underdeterrence of risky consumer conduct. This too fails to fulfill the goals of tort law. In this Article, the authors propose eliminating causation as an independent requirement in most failure-to-warn cases and instead determining an injured party's recovery by allowing proportional recovery, taking into account both the severity of the manufacturer's fault in failing to warn of the dangers associated with its product and the likelihood that the plaintiff's injuries would have been prevented by a warning. Such a system would recognize that some failures to warn are more egregious than others and would generate a closer match between aggregate compensation and aggregate injuries caused by a failure to warn.

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I. INTRODUCTION

Causation remains the problem child of product liability failure-to-warn law. Even if it is established that a manufacturer or distributor had a duty to warn end users about a particular risk and that such a warning was not given, the combination of substantive tort law and standard rules of civil litigation requires an injured end user to demonstrate a causal connection between the absent warning and the injury. Such a causal connection necessarily has three steps: first, that the end user would have read the warning; second, that the end user would have acted differently

had he or she been warned of the risk at issue; and third, that had the end user acted differently in light of the warning, he or she would not have suffered the injury (or the injury would have been less severe).[1] It is our contention that (1) factual adjudication of this three-step causal connection is beyond the capability of our legal system in all but the simplest cases; (2) the legal system's occasional and sporadic responses to its implicit recognition of the difficulties of this factual adjudication are not well suited to the social policies that underlie tort law in general and product liability law in particular; and (3) recent academic commentary that uses skepticism about the efficacy of warnings to justify the imposition of enterprise liability replicates, rather than cures, much of the arbitrariness of the current flawed system. We argue that rather than trying to fit a causation standard that will often be nonjusticiable as a practical matter into standard proof models in civil litigation, the tort system should eliminate proof of factual causation as the *sine qua non* of recovery in failure-to-warn cases and instead consider fault and causation together as a single unified issue for which the fact finder can find gradations of responsibility.

In product liability law, the issue of causation in failure-to-warn litigation involves inherent uncertainties that are different in both kind and degree from the difficulties associated with proof of facts in other product liability contexts. For example, in product liability cases predicated on a defective design or a manufacturing defect (rather than on a failure to warn), expert testimony can credibly resolve whether a safer alternative design or a product without a manufacturing defect would have avoided the plaintiff's injury. After all, such matters of science and engineering often can be addressed in ways that give us confidence that the conclusions drawn are accurate and not dependent on plumbing the murky recesses of human decisionmaking.[2] Indeed, in failure-to-warn cases in which doubt arises regarding whether the product in question brought about the plaintiff's physical injury, courts have had little difficulty resolving the issue. Even in toxic tort cases, when the fact-finding process can provide at best a probabilistic assessment as to causation of the plaintiff's injury, the

1. *See, e.g.*, DAN B. DOBBS, THE LAW OF TORTS § 367 (2000); DAVID G. OWEN, PRODUCTS LIABILITY LAW § 11.4, at 756 (2005).

2. OWEN, *supra* note 1, § 11.4, at 758 (noting that in manufacturing and design defect cases, "the factual causation issue typically is clear. The reason for this difference [between these cases and failure-to-warn cases] lies in the wide gulf between Newtonian physics and Freudian psychology"). *See also* Gen. Motors Corp. v. Saenz, 873 S.W.2d 353, 357 (Tex. 1993) ("Proving causation in a failure-to-warn case has peculiar difficulties. Proof that a collision between two cars would not have happened had defendant swerved or braked or driven within the speed limit is mostly a matter of physics. Proof that an accident would not have occurred if defendant had provided adequate warnings concerning the use of a product is more psychology and does not admit of the same degree of certainty.").

difficulties faced by the courts relate to the substantive law issue of how to treat such probabilities of injury causation rather than to the very different problem of confidently assessing whether a plaintiff would have made a different decision under different circumstances.[3]

In the bulk of failure-to-warn cases, however, in which there is significant and irreducible uncertainty as to whether the plaintiff would have acted differently had he or she been provided with a warning about the risk that ultimately gave rise to the injury, courts have floundered. As we noted in an earlier series of articles in the related field of informed consent, it is often impossible to determine with any degree of confidence whether a particular plaintiff would have chosen to reject a medical procedure had his or her physician provided risk information attendant to its administration.[4] Yet, the plaintiff's situation in informed consent cases is, at its base, merely a specialized failure-to-warn case. In both informed consent and failure-to-warn cases, (1) the plaintiff has acted without information that perhaps would have led to a different decision, and (2) as traditionally formulated, the cause of action requires the plaintiff to demonstrate that a different (and less harmful) decision would have been made had that information been provided. In the case of product-related risks, however, the causation issue is even more attenuated than in the narrower context of informed consent. Unlike informed consent cases, in which we can confidently posit that a hypothetical warning would have been heard by the patient had the physician fulfilled his or her duty of disclosure, in product warning cases there is necessarily greater uncertainty about whether the plaintiff would even have read a warning had it been given.[5] Moreover, how a plaintiff would have responded to a warning is even more speculative than it is in the informed consent situation.[6] Unlike the binary decision that confronts a plaintiff in an informed consent setting (that is, either go forward with the medical procedure or not), product users have a multitude of options available to them in deciding how or whether to use a product. They may choose modes of use reflecting various degrees of danger (ranging from use without regard for the warning to safer modes of

3. *See infra* notes 14–18 and accompanying text.

4. *See, e.g.*, Aaron D. Twerski & Neil B. Cohen, *Informed Decision Making and the Law of Torts: The Myth of Justiciable Causation*, 1988 U. ILL. L. REV. 607 (1988) [hereinafter Twerski & Cohen, *Informed Decision Making*] (discussing the impossibility of determining whether a particular patient would have chosen to reject a medical procedure had the doctor informed him or her of the risks involved); Aaron D. Twerski & Neil B. Cohen, *The Second Revolution in Informed Consent: Comparing Physicians to Each Other*, 94 NW. U. L. REV. 1, 8–9 (1999) [hereinafter Twerski & Cohen, *Comparing Physicians*].

5. *See infra* text accompanying notes 19–29.

6. *See infra* text accompanying notes 19–29.

use) or they may choose to use a different product entirely for the task at hand.

This dilemma, which makes it nearly impossible in any real sense for an injured end user to demonstrate by a preponderance of the evidence that he or she would have heeded a hypothetical warning that the manufacturer hypothetically may have given and thereby avoided injury, has not gone unnoticed. Scholars have advocated and many courts have adopted a "heeding presumption,"[7] shifting either the burden of coming forward or the burden of proof to the manufacturer.[8] As a practical matter, many of the decisions implementing the heeding presumption have imposed the functional equivalent of enterprise liability in failure-to-warn cases.[9] On the other hand, a fair number of courts have refused to adopt a heeding presumption,[10] or have permitted the rebuttal of the heeding presumption on specious grounds,[11] leaving the plaintiff in jeopardy of no recovery whatsoever. Despite the application of the heeding presumption, the problem persists. Even in cases in which we have good reason to believe that *some* users would have been influenced by a warning, we have no way to separate those users from others who would not have been so influenced.

In this Article, we argue that the traditional tort system applied without artificial presumptions and the proposed solutions (court created and academically advocated) intended to change the results that would follow from the application of traditional rules—both of which are essentially all-or-nothing approaches in which the end user is either held to have established causation or not—are inappropriate for failure-to-warn

7. *See, e.g.*, David A. Fischer, *Causation in Fact in Product Liability Failure to Warn Cases*, 17 J. PRODUCTS & TOXIC LIABILITY 271, 274–75 (1995); Mark Geistfeld, *Inadequate Product Warnings and Causation*, 30 U. MICH. J.L. REFORM 309, 310 n.7 (1997); Alan Schwartz, *Causation in Private Tort Law: A Comment on Kelman*, 63 CHI.-KENT L. REV. 639, 644 (1987). The seminal case advocating a rebuttable presumption that a warning, had it been given, would have been read and heeded is *Technical Chemical Co. v. Jacobs*, 480 S.W.2d 602, 606 (Tex. 1972). Other states have followed suit. *E.g.*, Nissen Trampoline Co. v. Terre Haute First Nat'l Bank, 332 N.E.2d 820, 826 (Ind. Ct. App. 1975), *rev'd on other grounds*, 358 N.E.2d 974 (Ind. 1976); Coffman v. Keene Corp., 628 A.2d 710, 720 (N.J. 1993); Seley v. G.D. Searle & Co., 423 N.E.2d 831, 838 (Ohio 1981); Cunningham v. Charles Pfizer & Co., 532 P.2d 1377, 1382 (Okla. 1974).

8. Throughout this paper we refer to the defendant as the manufacturer. We recognize that under strict liability, the entire distributive chain may be held liable when a product is marketed with inadequate warning. *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 1 cmt. e (1998).

9. *See infra* text accompanying notes 33–43.

10. *See, e.g.*, Latiolais v. Merck & Co., No. CV 06-02208, 2007 WL 5861354, at *4 (C.D. Cal. Feb. 6, 2007) (stating that no California court has adopted the heeding presumption); Lord v. Sigueiros, No. CV 040243, 2006 WL 1510408, at *3–4 (Cal. Super. Ct. Apr. 26, 2006); Riley v. Am. Honda Motor Co., 856 P.2d 196, 200 (Mont. 1993); Rivera v. Philip Morris, Inc., 209 P.3d 271, 274 (Nev. 2009).

11. *See infra* text accompanying notes 44–65.

cases. They overcompensate many plaintiffs and undercompensate others, as well as overcompensating plaintiffs as a class or undercompensating plaintiffs as a class. The case for enterprise liability has the support of such noted scholars as Jon Hanson, Douglas Kysar,[12] and Mark Geistfeld.[13] While some of these scholars may advocate enterprise liability in all tort cases—not just those predicated on a failure to warn—we show that, even if one were to limit enterprise liability to failure-to-warn cases, their arguments for that solution to the warning problem are seriously flawed.

We suggest an entirely different approach to the warning problem. Under current law, our view is that the all-or-nothing nature of the problem springs from the largely nonjusticiable issue of decision causation. We suggest eliminating decision causation as the "make or break" issue and instead propose that the elements of fault and causation be addressed together, rather than separately, to provide a unified fault-cause metric for determining the extent of liability.

In Part II of this Article, we demonstrate why the causation issue in failure-to-warn cases is nonjusticiable. In Part III we examine the responses that product liability law has provided in attempting to deal with the nonjusticiability of causation. In Part IV we examine why the all-or-nothing regimes are both ideologically flawed and practically unworkable. In Part V we present our proposal for an integrated fault-cause question. Finally, in Part VI we examine the problems in implementing our proposal and argue that, notwithstanding some difficulties, it is the best hope for rationally resolving the ever-elusive hypothetical but-for causation question. In Part VII we conclude.

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12. *See, e.g.*, Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: Some Evidence of Market Manipulation*, 112 HARV. L. REV. 1420 (1999) [hereinafter Hanson & Kysar, *Some Evidence of Market Manipulation*]; Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: The Problem of Market Manipulation*, 74 N.Y.U. L. REV. 630 (1999) [hereinafter Hanson & Kysar, *Problem of Market Manipulation*]. For a rebuttal, see James A. Henderson, Jr. & Jeffrey J. Rachlinski, *Product-Related Risk and Cognitive Biases: The Shortcomings of Enterprise Liability*, 6 ROGER WILLIAMS U. L. REV. 213 (2000); and for a surrebuttal, see Jon D. Hanson & Douglas A. Kysar, *Taking Behavioralism Seriously: A Response to Market Manipulation*, 6 ROGER WILLIAMS U. L. REV. 259 (2000) [hereinafter Hanson & Kysar, *Response to Market Manipulation*].

13. Mark Geistfeld, *Implementing Enterprise Liability: A Comment on Henderson and Twerski*, 67 N.Y.U. L. REV. 1157 (1992). For a response, see James A. Henderson, Jr. & Aaron D. Twerski, *The Unworkability of Court-Made Enterprise Liability: A Reply to Geistfield*, 67 N.Y.U. L. REV. 1174 (1992).

II. THE NONJUSTICIABILITY OF CAUSATION IN MOST FAILURE-TO-WARN CASES

In every failure-to-warn case there are two major causation issues: injury causation and decision causation. First, a plaintiff must establish that the product caused his or her injury.[14] For example, in many pharmaceutical failure-to-warn cases, the plaintiff may allege that the drug manufacturer failed to provide adequate warning of the risks associated with taking the drug. Defendants often respond that the plaintiff did not contract the disease or other ailment forming the basis for the suit from the drug but rather from another source.[15] In some instances, defendants lay the blame on background risk and claim that evidence of general causation is unavailable.[16] In other instances, if general causation supports the claim that the drug was capable of causing the disease, the defendant may argue that specific causation cannot be established because in the plaintiff's case the disease may have been brought about by a medical condition unrelated to the drug.[17] These causation issues are subject to proof or disproof based on hard science. They have been the subject of much debate in the post-*Daubert* era and are not the subject of concern in this paper.[18]

The issue of decision causation in failure-to-warn cases has proven to

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14. *See* JAMES A. HENDERSON, JR. & AARON D. TWERSKI, PRODUCTS LIABILITY: PROBLEMS AND PROCESS 120–21 (6th ed. 2008); OWEN, *supra* note 1, § 11.2, at 733.

15. *See, e.g.*, Rider v. Sandoz Pharm. Corp., 295 F.3d 1194, 1196 (11th Cir. 2002) (holding that the plaintiffs' expert testimony linking the drug to their strokes was properly excluded by the district court for lack of reliability); Brock v. Merrell Dow Pharm., Inc., 874 F.2d 307, 315 (5th Cir. 1989) (applying Texas law and holding that the plaintiff "did not present sufficient evidence regarding causation").

16. A plaintiff must establish that the defendant's product is capable of causing the illness suffered by the plaintiff. This proof may be accomplished through the use of expert testimony. The seminal case setting forth the standard for the admissibility of expert evidence in the federal courts is *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

17. *See, e.g.*, Cavello v. Star Enter., 892 F. Supp. 756, 771 (E.D. Va. 1995) ("If other possible causes of an injury cannot be ruled out, or at least the probability of their contribution to causation minimized, then the 'more likely than not' threshold for proving causation may not be met."), *aff'd in part, rev'd in part*, 100 F.3d 1050 (4th Cir. 1996). For a comprehensive discussion of general and specific causation in the post-*Daubert* era, see RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 28 cmt. c & reporters' note at 443–63 (2010).

18. For review of post-*Daubert* developments, see HENDERSON & TWERSKI, *supra* note 14, at 122–33. For the view that post-*Daubert* courts are too restrictive with respect to admissibility decisions, see Neil B. Cohen, *The Gatekeeping Role in Civil Litigation and the Abdication of Legal Values in Favor of Scientific Values*, 33 SETON HALL L. REV. 943 (2003). For the view that the application of *Daubert* masks fundamental issues of liability in prescription drug failure-to-warn cases because the difficulty in proving causation negates the plaintiff's right to choose to be exposed to material risk, see Margaret A. Berger & Aaron D. Twerski, *Uncertainty and Informed Choice: Unmasking* Daubert, 104 MICH. L. REV. 257 (2005).

be especially problematic to the law. Would the end user have made a different decision as to how to use the product if an adequate warning about its risks had been given? Assuming a fact finder decides that a product was not reasonably safe because either it bore no warning or the warning was inadequate, the causation issue must confront three areas of uncertainty. First, how would the hypothetical warning have been phrased? After all, many different possible warnings could be considered reasonable and thus satisfy the manufacturer's duty to warn, yet a particular end user might react differently to reasonable warnings that vary in their phrasing and display. Second, would the end user have read the warning had it been given? Third, would the end user have acted differently to reduce the risk in accordance with the warning?

Over the past two decades social scientists have investigated the efficacy of warnings and the variables that may impact end-user decisions as to how to use a product. The literature is vast.[19] The number of variables that affect whether a particular plaintiff would or would not have read or heeded a warning is so substantial that it is sheer folly to predict whether in any given setting a warning or an alternative warning would have been efficacious. A few such variables are summarized here:

(1) *Readability*. Researchers have identified more than one hundred indices of readability, reading level, or complexity of written material. The choice of words and complexity of sentence structure may depend on the target audience.[20] To decide whether any given plaintiff would have read the warning or altered behavior had a different warning been given would

19. For an excellent collection of articles on this topic, see WARNINGS AND RISK COMMUNICATION (Michael S. Wogalter, David M. Dejoy & Kenneth R. Laughery eds., 2005).

20. *See* S. David Leonard, Hajime Otani & Michael S. Wogalter, *Comprehension and Memory*, *in* WARNINGS AND RISK COMMUNICATION, *supra* note 19, at 139, 146 ("For example, most of the readability formulae assume that all shorter words and sentences are more understandable than longer ones. . . . [B]ut using shorter words and sentences will not automatically enhance understanding."); Stephen L. Young & David R. Lovvoll, *Intermediate Processing Stages: Methodological Considerations for Research on Warnings*, *in* WARNINGS AND RISK COMMUNICATION, *supra* note 19, at 23, 31; N. Clayton Silver et al., *Warnings and Purchase Intention For Pest-Control Products*, 4 FORENSIC REP. 17, 29 (1991) ("Because most warning guidelines recommend that well-designed warnings should be concise and written for the reading level of the lowest ability user, we expected that people would be more willing to read shorter, lower-grade level warnings. Our results, however, indicated just the opposite. The correlations showed that people were more willing to read warnings that had text containing more statements and more difficult material."). N. Clayton Silver and colleagues speculate that the participants in the study were taken from populations with higher reading levels than the general population. Silver et al., *supra*, at 29. We note that the difficulty in choosing a reading level, given the great variability among users, is a substantial problem in formulating an alternative warning and in deciding whether an alternative warning would have been read and heeded.

For a review of the most commonly used readability tests, see George R. Klare, *Assessing Readability*, 10 READING RES. Q. 62 (1974–1975).

require an individual assessment of each particular plaintiff.

(2) *Coherence*. How the message is presented may have a profound effect on its comprehensibility. Relatively minor wording differences may affect whether a given plaintiff would have understood the warning.[21]

(3) *Brevity and length of warnings*. Although short warnings are more effective, the optimum length of warnings is a matter of debate and is highly contextual.[22]

(4) *Location of warnings*. Investigators disagree, for example, about whether warnings should be set off in a separate "Warnings" section or should be integrated in the instructions for use.[23]

Of even greater significance are the attitudes and beliefs that a particular plaintiff brings to product use. Biases in risk perception have a profound effect on how a user may react to a warning:

(1) *Overconfidence and optimism*. Numerous studies demonstrate that although people may be able to give fairly accurate assessments of the risks associated with various consumer products, they do not think that the risks apply to them personally.[24]

(2) *Availability*. The tendency to overestimate infrequent causes of

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21. G. Ray Funkhouser, *An Empirical Study of Consumers' Sensitivity to the Wording of Affirmative Disclosure Messages*, 3 J. PUB. POL'Y & MARKETING 26, 27 (1984) (showing that versions of affirmative disclosures that differed in relatively slight and subtle ways produced significant differences in consumer comprehension); Christopher M. Heaps & Tracy B. Henley, *Language Matters: Wording Considerations in Hazard Perception and Warning Comprehension*, 133 J. PSYCHOL. 341, 350 (1999) ("Although more explicit and definite wording in product labels results in a generally more believable warning, the improved warning's credibility may not necessarily translate into safer consumer behavior.").

22. *See, e.g.*, Young & Lovvoll, *supra* note 20, at 31.

23. *Id.* at 125–26, 241–42. Several studies support the notion that, contrary to common belief, warnings should not be set off in a separate section. These studies found greater compliance when the warnings were placed in the instruction section of the label. *See, e.g.*, J. Paul Frantz, *Effect of Location and Presentation Format on Attention to and Compliance with Product Warnings and Instructions*, 24 J. SAFETY RES. 131, 132–33 (1993); J. Paul Frantz, *Effect of Location and Procedural Explicitness on User Processing of and Compliance with Product Warnings*, 36 HUM. FACTORS 532, 543 (1994). *See also* Keyla Friedmann, *The Effect of Adding Symbols to Written Warning Labels on User Behavior and Recall*, 30 HUM. FACTORS 507, 514 (1988) ("Almost 20% of the subjects . . . read only the first sentence of the warning."); Jill Annette Strawbridge, *The Influence of Position, Highlighting, and Imbedding on Warning Effectiveness*, 30 PROC. HUM. FACTORS SOC'Y 716, 719 (1986) ("Approximately 35% of the subjects reported that once they had read far enough into the Warning section to realize what it was, they stopped reading and continued on.").

24. Sarah Lichtenstein et al., *Judged Frequency of Lethal Events*, 4 J. EXPERIMENTAL PSYCHOL.: HUM. LEARNING & MEMORY 551, 574–76 (1978); Neil D. Weinstein, *Unrealistic Optimism About Susceptibility to Health Problems: Conclusions from a Community-Wide Sample*, 10 J. BEHAV. MED. 481, 481 (1987).

injury and underestimate frequent causes may be dependent on how available information regarding injury frequency is to the particular plaintiff. A plaintiff may be motivated to heed a warning because the injury was the subject of media coverage or occurred to someone that the plaintiff knew, but may disregard warnings that lack a similar sense of immediacy or availability.[25]

(3) *Suppression*. Consumers who have preconceived notions about the risk associated with the use of a product are likely to disregard information in a warning that is inconsistent with their preconceived opinions.[26]

(4) *Familiarity*. Closely related is the phenomenon that consumers who have personal familiarity with a product are likely to be resistant to new information or warnings about dangers associated with the product.[27]

(5) *Attitudes toward risk*. Consumers exposed to the same perceived level of hazard may respond differently given their relative averseness to risk.[28]

In light of these variables, it is not surprising that the following studies show a marked difference between those who noticed, read, and complied with warnings.

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25. *See* Twerski & Cohen, *Informed Decision Making*, *supra* note 4, at 632–34; Michael S. Wogalter, Douglas J. Brems & Elaine G. Martin, *Risk Perception of Common Consumer Products: Judgments of Accident Frequency and Precautionary Intent*, 24 J. SAFETY RES. 97, 98 (1993).

26. *See* David M. DeJoy, *Attitudes and Beliefs*, *in* WARNINGS AND RISK COMMUNICATION, *supra* note 19, at 186, 196, 200–01 & tbl.9.5. The authors note that "people holding preconceived notions about the risk associated with a particular product . . . will ignore or misappraise new information if it is inconsistent with their current thinking." *Id.* at 196. When they do not hold strong views, they are at the mercy of how warnings are framed. For an extensive discussion about how framing influences decisionmaking, see Twerski & Cohen, *Informed Decision Making*, *supra* note 4, at 634–39. To credibly assess the causal relationship between a failure to warn and plaintiff conduct, one would have to determine a multitude of hypotheticals with different framing perspectives—a task beyond the capacity of any court to accomplish.

27. *See* DeJoy, *supra* note 26, at 199–203.

28. Thomas J. Ayres et al., *What Is a Warning and When Will It Work?*, 33 PROC. HUM. FACTORS SOC'Y 426, 428 (1989).

TABLE. Percentages of Subjects Who Noticed, Read, and Complied with Warnings

Study	*Noticed (%)*	*Read (%)*	*Complied (%)*
Frantz and Rhoades (1993)[a]	57	42	28
Friedmann (1988)[b]	88	46	27
Otsubo (1988)[c]	64	39	26
Strawbridge (1986)[d]	91	77	37

Note: This table is taken from DeJoy, *supra* note 26, at 187 tbl.9.1.

[a] J. Paul Frantz & Timothy P. Rhoades, *A Task-Analytic Approach to the Temporal and Spatial Placement of Product Warnings*, 35 HUM. FACTORS 719, 721–23, 729 (1993) (involving an experimental study on file cabinets with warnings that alerted the user to dangers of tipping when improperly loaded).

[b] Friedmann, *supra* note 23, at 515 (describing an experimental study warning about dangers of eye contact and inhalation of liquid drain opener and wood cleaner).

[c] Shirley M. Otsubo, *A Behavioral Study of Warning Labels for Consumer Products: Perceived Danger and Use of Pictographs*, 32 HUM. FACTORS SOC'Y 536, 537–38 (1988) (explaining an experimental study of an electric saw with warnings for users to wear gloves to avoid being cut by a sharp blade).

[d] Strawbridge, *supra* note 23, at 716–20 (describing an experimental study on a liquid adhesive with warnings that the bottle contained acid and should be shaken before use to prevent injury).

The variables do not demonstrate that warnings are worthless. Some users will be attentive and will alter their behavior to heed a warning. But the number of variables that can increase or decrease the impact of a warning makes it clear that attempting to draw a causal relationship between the absence of an adequate warning and a plaintiff's subsequent injury is simply not justiciable. Courts would have to examine the mindset of any given plaintiff with regard to each of the variables set forth (and many others not listed) to determine whether a warning would have made a difference. Furthermore, to the extent that several alternative warnings may be reasonable, it is impossible to tell whether a particular plaintiff would have responded to one or another of the alternatives.

The implication of this indeterminacy, if the causation requirement is applied honestly, is that few plaintiffs, if any, could win a failure-to-warn case. After all, even the most optimistic studies have shown that well less than half of those to whom warnings are provided actually comply with them. Thus, a majority of injuries that occur in the absence of a warning would occur even if a warning were given. This of course means that to have any hope of demonstrating decision causation by a preponderance of the evidence, a plaintiff would need to show that he or she is more likely than the typical product user to have noticed, read, and heeded the hypothetical warning. Given the speculative nature of the inquiry

(including the choice of a particular hypothetical warning), however, it would be nearly impossible for most plaintiffs to demonstrate decision causation by a preponderance of the evidence. Accordingly, under an honest application of the causation requirement, most plaintiffs in failure-to-warn cases that are adjudicated under traditional tort standards should probably lose.[29]

Yet, this result would be highly unsatisfactory. While there may be no credible proof that any particular user of a dangerous product would have avoided injury had a warning been given, this is not the same thing as saying that no injuries are caused by a failure to warn. For example, the studies summarized above each show that over a quarter of the subjects noticed, read, and complied with the warning presented. Avoidance of the risk associated with the product by these users could have prevented over a quarter of the injuries associated with the risk. A tort system that does not provide some relief for those injuries undercompensates victims and underdeters dangerous behavior by manufacturers. Thus, the result of applying an all-or-nothing decision-causation standard in warning cases is not acceptable. This is not a critique of traditional proof rules in individual tort cases, which provide complete recovery for a plaintiff who demonstrates by a preponderance facts supporting recovery yet provide no recovery to a plaintiff who fails to reach that probability threshold. In those cases, the legal system is awarding a verdict that is consistent with its best assessment of uncertain facts. In warning cases, on the other hand, denying recovery to *all* injured users when there is a high degree of confidence that many injuries would have been prevented by a warning (or vice versa) is *inconsistent* with the legal system's best assessment of the facts.

III. HOW PRODUCT LIABILITY LAW HAS DEALT WITH THE NONJUSTICIABILITY OF CAUSATION

American courts have been uneven in their treatment of causation in failure-to-warn cases. Under the guise of the heeding presumption, some courts have done away with causation as an element of the cause of action, effectively applying enterprise liability to warning cases. Others have demanded rigorous proof of causation, thus erecting an almost unscalable barrier to recovery.

Courts applying the heeding presumption almost invariably cite as authority comment j to section 402A of the *Restatement (Second) of Torts*.

29. *See* Twerski & Cohen, *Informed Decision Making*, *supra* note 4, at 644–45 (arguing that an honest application of causation principles would negate recovery in most informed choice cases).

The comment provides that "[w]here warning is given, the seller may reasonably assume that it will be read and heeded; and a product bearing such a warning, which is safe for use if it is followed, is not in defective condition, nor is it unreasonably dangerous."[30]

From this premise, courts argue that if a seller is entitled to a presumption that a warning, when given, will be read and heeded, then the product user is entitled to a similar presumption when a warning is not given—that is, had it been given, it would have been read and heeded.[31] The logic is flawed. If a product is reasonably designed and accompanied by reasonable warnings, the defendant escapes liability not because there is any assurance that the warning will be read and heeded. Indeed, as we have demonstrated, there is little reason to have confidence that warnings are generally read and heeded. Rather, liability does not attach because the product is simply not defective. The manufacturer has done all it can to make the product reasonably safe. When an appropriate warning is not given, the question that arises is whether the failure to warn was the cause in fact of the plaintiff's harm. Whether any given plaintiff would have read and heeded a warning raises a difficult causation problem that is not informed by comment j's assumption that a product with adequate warnings is simply not defective.[32]

The heeding presumption has, in many jurisdictions, taken on the face of enterprise liability.[33] *Liriano v. Hobart Corp.*[34] is illustrative. The plaintiff, a seventeen-year-old recent immigrant from the Dominican Republic, was hired by a Bronx supermarket, Super Associated, as a

30. RESTATEMENT (SECOND) OF TORTS § 402A cmt. j (1965).

31. *See, e.g.*, Wooderson v. Ortho Pharm. Corp., 681 P.2d 1038, 1057 (Kan. 1984); Butz v. Werner, 438 N.W.2d 509, 517 (N.D. 1989); Seley v. G.D. Searle & Co., 423 N.E.2d 831, 838 (Ohio 1981).

32. This argument is fully developed in James A. Henderson, Jr. & Aaron D. Twerski, *Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn*, 65 N.Y.U. L. REV. 265, 278–80 (1990). *See also* Gen. Motors Corp. v. Saenz, 873 S.W.2d 353, 358 (Tex. 1993) (recognizing the logical flaw in drawing authority from comment j to section 402A, but recognizing the heeding presumption on policy grounds).

33. In a perceptive article, Professor James Henderson has identified strains of enterprise liability in some failure-to-warn cases. *See* James A. Henderson, Jr., *Echoes of Enterprise Liability in Product Design and Marketing Litigation*, 87 CORNELL L. REV. 958, 989–94 (2002). Henderson identifies *Liriano v. Hobart Corp.*, 170 F.3d 264 (2d Cir. 1999), as a case that effectively imposes enterprise liability. He also suggests that *Ayers v. Johnson & Johnson Baby Products Co.*, 797 P.2d 527 (Wash. Ct. App. 1990), *aff'd*, 818 P.2d 1337 (Wash. 1991); and *Hon v. Stroh Brewery Co.*, 835 F.2d 510 (3d Cir. 1987), are cases that demonstrate a trend toward enterprise liability. This Article argues that the widespread adoption of the heeding presumption has brought enterprise liability to a far broader class of cases than Henderson identifies.

34. *Liriano*, 170 F.3d 264. The facts of *Liriano*, summarized here, are fully expanded on in Brief of Defendant Hobart Corp. at 2–5, *Liriano*, 170 F.3d 264 (Nos. 96-9641L, 97-7449).

butcher's assistant. He was paid $250 per week in cash (off the books) and was expected to work eight to ten hours a day for as many as seven days per week for the same salary. The plaintiff understood and read very little English at the time of the accident. He was injured on the job when he was feeding meat into a Hobart meat grinder. He pushed his hand deeply into an eight and one half–inch cylinder and it became enmeshed with the grinding mechanism, resulting in the amputation of his right hand and forearm.

The Hobart grinder in question was thirty years old and was equipped with a barrier guard permanently riveted onto the pan in which meat was placed. As designed, the pan had sufficient clearance to allow pieces of meat to enter the cylinder for grinding but the guard made it impossible for the user to get his or her hand into the cylinder. Sometime during the week before the accident, however, an employee of Super Associated sawed off the safety guard, enabling the tragic accident to occur. There was no question that had the safety guard been in place, the plaintiff would not have been injured. The case went to trial solely on the issue of Hobart's failure to provide a postsale warning relating to the danger of operating the grinder without the safety guard. The employee's sole claim was that a warning would have alerted either the employee or his employer to the unsafe condition of the unguarded grinder.[35] In its brief, Hobart argued that any failure to warn could not have been causally related to the plaintiff's injury:

> In order to allow such claims to reach the jury this Court would have to believe that, despite the plaintiff's need for a job that compelled him to work 50–70 hours per week for $250, he would refuse to grind meat and be fired. Or even more unlikely, that the third-party defendant Super Associated, who callously exploited cheap immigrant labor and who removed the safety guard, would suddenly be struck by conscience and stop selling ground meat until a new part with the safety guard in place could be procured.[36]

Despite these arguments, the U.S. Court of Appeals for the Second Circuit upheld a jury verdict in favor of the employee. Speaking for the court, Judge Calabresi found that even if the danger were obvious, the manufacturer still had a duty to inform employees that they need not accept the risks of using unguarded grinders.[37] Furthermore, as to the issue of causation, Calabresi held that when the defendant's negligence had

35. *Liriano*, 170 F.3d at 270–71.
36. Brief of Defendant Hobart Corp., *supra* note 34, at 40–41.
37. *Liriano*, 170 F.3d at 269–70.

> a strong propensity to cause the type of injury that ensued, that very causal tendency is evidence enough to establish a *prima facie* case of cause-in-fact. The burden then shifts to the *defendant* to come forward with evidence that its negligence was *not* such a but-for cause.[38]

This burden shifting is, for all practical purposes, a species of enterprise liability. First, a warning in English would have been of no utility for the young immigrant plaintiff who had yet to learn the language. No one suggested, and it is hard to imagine, a pictorial warning that would have alerted the plaintiff to the absence of the safety guard. The argument that there was no evidence that the plaintiff would have refused to grind meat or that a warning would have convinced the employer to halt use of the grinder until a new part was purchased and welded to the pan was set aside because the heeding presumption shifted the burden of providing that evidence to the defendant. What kind of evidence could the defendant have presented to rebut the presumption? Anything short of an outright admission by the plaintiff or the employer that he or she would have paid no heed to the warning would not have rebutted the presumption. The warning presumption, though formally denominated as rebuttable, was for all practical purposes absolute. Thus, by the seemingly dry procedural mechanism of burden shifting, the court transformed traditional tort principles, which, as we have demonstrated, may result in underenforcement and underdeterrence, into an alternative regime with opposite results. Just as a regime of underenforcement and underdeterrence is not acceptable, a regime that results in overcompensation and overdeterrence is similarly unjust.

Another method used by courts to transform weak causal links of failure-to-warn cases into victories for injured product users can best be described as a "grapevine warning." In *DeRienzo v. Trek Bicycle Corp.*,[39] the plaintiff had purchased a used mountain bike over the Internet. In the two years following the purchase, the plaintiff regularly engaged in "bike jumping." On the day of the accident, the plaintiff was executing a jump causing the bike to drop five to eight feet off a ledge created by a rock sticking out of a hill. Upon landing, the bike broke apart, throwing the plaintiff from the bike and causing serious injuries. In addition to the claim that the bike had an original manufacturing defect, the plaintiff alleged that the defendant failed to warn that the bike could break when the user engaged in jumping.[40] Though such a warning was in fact included in the

38. *Id.* at 271.
39. DeRienzo v. Trek Bicycle Corp., 376 F. Supp. 2d 537 (S.D.N.Y. 2005).
40. *Id.* at 562.

bicycle manual, the court held that the adequacy of the warning was a jury question.[41] The defendant bike manufacturer countered that the plaintiff had never seen the manual and that the heeding presumption was rebutted as a matter of law.[42] In rejecting that claim, the court held that

> a jury could conclude that, had an adequate warning against jumping been issued with the Bike . . . , the 'realities of society'—i.e., the realities of the mountain biking community—might have resulted in Plaintiff's friends advising him not to use [the particular] model for jumping, even if Plaintiff had not read the warning himself.[43]

If the mere possibility that others might have read the warning in a manual and have related the warning is sufficient to overcome an attempted rebuttal of the heeding presumption, then the presumption is, for all practical purposes, irrebuttable. Is the defendant to call hundreds, if not thousands, of mountain bikers to testify that they had read the manual with its inadequate warnings, and that even had the warnings been more stringent, they would not have related the information about the dangers to the plaintiff?

Just as the heeding presumption, the grapevine theory turns traditional tort doctrine on its head. Under traditional doctrine, plaintiffs rarely can credibly prove causation in failure-to-warn cases, and placing the burden of persuasion on them is therefore tantamount to insulating manufacturers from liability. Conversely, the heeding presumption and grapevine theory make it so unlikely that such causation will *not* be found that applying either or both of these theories creates a system very close to enterprise liability in its results even if the system is not described that way.

On the other hand, some courts have been willing to rebut the heeding presumption on specious grounds. Consider, for example, *Golonka v. General Motors Corp*.[44] The plaintiff, Ruth Golonka, parked her car in front of her neighbor's house to load chairs into the truck bed. She attempted to shift her transmission into "park" but apparently mis-shifted to a position between "park" and "reverse." Before leaving the truck she did not turn off the engine, remove the key, or set the parking brake. When she

41. *Id.* at 568.

42. Quoting *Liriano*, the court held that "the law presumes normality and requires the defendant to bring in evidence tending to rebut the strong inference, arising from the accident, that defendant's negligence [in failing to warn] was in fact a but for cause of the plaintiff's injury." *Id.* at 566 (quoting *Liriano*, 170 F.3d at 271). The defendant argued that the plaintiff admitted that he had never read the existing warning, and that thus the heeding presumption was rebutted and the defendant was entitled to summary judgment. *Id.* at 568.

43. *Id.* at 570.

44. Golonka v. Gen. Motors Corp., 65 P.3d 956 (Ariz. Ct. App. 2003).

walked to the back of the truck and dropped the tailgate to load a chair, the truck self shifted into reverse, backing over her and killing her.[45] The plaintiff's experts testified that the truck should have been equipped with an audible warning signal or flashing lights that would be triggered by a mis-shift to alert Mrs. Golonka to the danger.[46] On appeal, the court held that although Arizona applies a heeding presumption in failure-to-warn cases, the defendant had successfully rebutted the presumption in this case.[47] It reasoned that Mrs. Golonka had disregarded instructions in the owner's manual advising that before leaving the truck the driver should "apply the parking brake, shift to park, shut off the engine, and remove the key."[48] She had also ignored a buzzer that activated when she opened the door with the key still in the ignition.[49] The court concluded that because she ignored safety warnings related to the accident, a jury could conclude that Mrs. Golonka "would have similarly ignored adequate warnings about mis-shifts."[50]

This conclusion seems wrong. An audible warning of a mis-shift indicates that something is radically wrong and that the driver is in serious danger of the car's shifting into either "drive" or "reverse." That Mrs. Golonka did not pay attention to the rather humdrum safety suggestions in the owner's manual or to the buzzer indicating that she had left the key in the ignition seems hardly relevant to whether she would have paid attention to an audible warning indicating that the car could take off on its own. The finding is particularly offensive in that the plaintiff was killed in the accident and is in no position to testify as to why she did not follow General Motors' safety suggestions and why a warning of a different magnitude would have made a difference. Arizona follows the "bursting bubble" theory of rebuttable presumptions.[51] Once the presumption is rebutted, the trial judge may not refer to the presumption in jury instructions.[52] Admittedly, on retrial the jury might still find for the plaintiff, but without the presumption her case is at a serious disadvantage.

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45. *Id.* at 960.

46. *Id.* at 966.

47. *Id.* at 972. The Arizona court held that once the presumption is rebutted, it leaves the case and the "existence or non-existence of the presumed fact must be determined as if the presumption had never operated in the case." *Id.* The appeals court reversed the trial court because it instructed the jury that the heeding presumption shifts the burden to the defendant to prove that an adequate warning would not have been heeded. *Id.* at 967, 972.

48. *Id.* at 972.

49. *Id.*

50. *Id.*

51. *Id.* at 970.

52. *Id.*

Another example of a questionable rebuttal of the heeding presumption arose in *Graves v. Church & Dwight Co.*[53] In that case, the plaintiff, who was suffering from indigestion after a heavy meal, took roughly one and one-half teaspoons of Arm & Hammer baking soda in a glass of water. Baking soda has been used as an antacid for more than one hundred years.[54] The label on the box of baking soda for use as an antacid read "½ tsp. in glass of water every 2 hours."[55] The plaintiff thus took approximately three times the recommended dosage.[56] The plaintiff swallowed four gulps of the baking soda and water mixture and immediately experienced enormous pain in his stomach. The plaintiff's experts testified that the baking soda in the plaintiff's stomach caused his stomach to rupture.[57] They further testified that the baking soda box did not contain warnings that overdosing could cause stomach rupture.[58] At trial, the jury found that Arm & Hammer had failed to provide adequate warnings but that the failure to warn was not causal since the plaintiff would neither have read nor heeded the warnings if given.[59] The plaintiff argued that New Jersey applies a heeding presumption in failure-to-warn cases and that the defendant had not rebutted the presumption.[60] The court held that there were "several areas of evidence which sufficiently support the conclusion [that the presumption was rebutted and] that a jury question was presented."[61] The court noted that for five years prior to his accident, the plaintiff had smoked two or three packs of cigarettes per day and that he had a cigarette cough even though he was aware that cigarettes bore a warning from the Surgeon General concerning health hazards.[62] This evidence, the court held, "provided the jury with a basis to make an analogy between [the plaintiff's] smoking in the face of the health warnings on cigarettes, and his projected behavior if a warning had been on the baking soda."[63]

In *Graves*, there was other evidence that supported the rebuttal of the presumption,[64] but the court's willingness to treat the plaintiff's smoking as

53. Graves v. Church & Dwight Co., 631 A.2d 1248 (N.J. Super. Ct. App. Div. 1993).
54. *Id.* at 1252.
55. *Id.* at 1253.
56. *Id.* at 1258 n.8.
57. *Id.* at 1253.
58. *Id.*
59. *Id.* at 1250–51.
60. *Id.* at 1255.
61. *Id.* at 1257.
62. *Id.*
63. *Id.*
64. *Id.* at 1258 (noting the plaintiff's inconsistent testimony as to when he last read the baking

evidence to rebut the heeding presumption is troubling. That one might be willing to face the possible long-term risk of ill health twenty or thirty years later should not rebut the presumption that he would have ignored a warning that overdosing on baking soda could cause immediate stomach rupture. Without this presumption, the plaintiff was at a decided disadvantage to prove that he would have read and heeded a warning.

Admittedly, courts could take a more limited view of what evidence suffices to rebut a presumption.[65] A narrower selection of admissible evidence available to rebut a presumption, however, leaves the defendant with fewer arguments to prevail on the warning issue. Once again, strengthening the presumption simply means that the plaintiff will emerge with a winner-take-all verdict.

In short, under the current regime, the heeding presumption in many cases may be irrebuttable and thus tantamount to imposing enterprise liability for product liability failure-to-warn claims. Conversely, honest application of traditional tort requirements of proof of causation would result in denial of recovery for most plaintiffs even when a warning would have prevented many injuries. It is not credible that *all* injuries would have been prevented by an adequate warning, and equally incredible that *no* injuries would have been prevented by an adequate warning. Yet, traditional tort requirements and their "cure" in the form of heeding presumptions and the like push the legal system to one of these extremes. Both extremes, though, fail to deal with the reality that the issue of causation in failure-to-warn claims is not justiciable.

IV. IS ENTERPRISE LIABILITY WARRANTED IN FAILURE-TO-WARN LITIGATION?

Artificial manipulation of the traditional tort model by utilization of a heeding presumption is not the only response to the undercompensation inherent in honestly applying the traditional tort model to warning cases. A second response, one that would fundamentally change the tort system rather than stay within its general boundaries, is that failure-to-warn cases, as product defect cases, should be resolved by enterprise liability rather

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soda label).

65. *See, e.g.*, Magro v. Ragsdale Bros., Inc., 721 S.W.2d 832, 834 (Tex. 1986) (reversing the trial court's finding that the heeding presumption was rebutted by isolated instances of laxity in judgment and stating that "[e]vidence of inattentiveness, unrelated to the plaintiff's ability to perceive or heed warnings or instructions and *which does not rise to the level of habit* . . . is not admissible to prove that [the plaintiff] would have acted in a consistent manner by ignoring adequate warnings or instructions" (emphasis added)).

than by a system based on fault.

The most forceful proponents of enterprise liability in warning cases have been Jon Hanson and Douglas Kysar, who have advocated such an approach in a provocative series of articles.[66] Their analysis is lengthy, but their conclusion is bold. Because of the provocative nature of both their analysis and their conclusion, we address their articles in some detail.

Hanson and Kysar start from a now commonplace observation—"human decisionmaking processes are prone to nonrational, yet systematic, tendencies"[67]—and quickly jump to an important legal assertion: "Ultimately, any legal concept that relies in some sense on a notion of reasonableness or that is premised on the existence of a reasonable or rational decisionmaker will need to be reassessed in light of the mounting evidence that a human is 'a reasoning rather than a reasonable animal.'"[68] The Hanson-Kysar reassessment of warning law is massive but can be broken down into a small number of steps.

First, Hanson and Kysar present an extensive survey of modern behavior literature that casts doubt on the assumed rational decisionmaking that is at the heart of game theory as well as many legal liability rules. Summarizing many of the important behavioral research findings of the Daniel Kahneman and Amos Tversky canon,[69] as well as work inspired by the findings of those pathbreakers, Hanson and Kysar go beyond "merely catalog[ing] a set of observed behavioral quirks"[70] to suggest a model of decisionmaking that is "relevant to a broader and more realistic range of behavioral contexts than the traditional economic actor."[71]

Second, Hanson and Kysar analyze the reaction of products liability

66. Hanson & Kysar, *Response to Market Manipulation*, *supra* note 12; Hanson & Kysar, *Some Evidence of Market Manipulation*, *supra* note 12; Hanson & Kysar, *Problem of Market Manipulation*, *supra* note 12.

67. Hanson & Kysar, *Problem of Market Manipulation*, *supra* note 12, at 633.

68. *Id.* at 634–35 (quoting Alexander Hamilton, *in* LAURANCE J. PETER, PETER'S QUOTATIONS: IDEAS FOR OUR TIME 315 (1977)).

69. *E.g.*, JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982); Amos Tversky & Daniel Kahneman, *Rational Choice and the Framing of Decisions*, *in* RATIONAL CHOICE: THE CONTRAST BETWEEN ECONOMICS AND PSYCHOLOGY 67, 90–91 (Robin M. Hogarth & Melvin W. Reder eds., 1987); Daniel Kahneman & Amos Tversky, *Choices, Values, and Frames*, 39 AM. PSYCHOLOGIST 341, 343 (1984).

70. Hanson & Kysar, *Problem of Market Manipulation*, *supra* note 12, at 638.

71. *Id.* The quoted sentence goes on to indicate that the authors' decisionmaking model is also relevant in a range of behavioral contexts broader than the "newly enhanced economic actor (with biases) offered by [Christine] Jolls, [Cass R.] Sunstein, and [Richard] Thaler." *Id.* (citing Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998) (describing the economic actor model mentioned)).

scholarship to behavioral research and its implications for our understanding of consumer risk perception. The analysis begins with the observation that the movement from negligence toward enterprise liability for product-caused accidents is premised on three assumptions—(1) that "[c]onsumers are imperfectly informed of product risks," (2) that "manufacturers exert exploitative market power over consumers," and (3) that "manufacturers are best able to insure against the costs of product-caused accidents"[72]—and that the case for or against enterprise liability depends on the accuracy of those assumptions.[73] The reaction of products liability scholarship to the first of these three assumptions, Hanson and Kysar conclude, can essentially be divided into two camps: those who argue that consumers *under*estimate product risks and those who argue that consumers *over*estimate product risks.[74] The underestimation view leads to the conclusion that increased manufacturer liability would create an incentive for manufacturers to address risks that would not be borne by them under traditional tort law, while the overestimation view leads to the conclusion that increased manufacturer liability would lead to greater inefficiency. After presenting a survey of the literature in this area, including detailed consideration of the American Law Institute's 1991 Reporters' Study on Enterprise Responsibility for Personal Injury,[75] Hanson and Kysar essentially conclude that this scholarship has missed the point.[76] The important issue, according to Hanson and Kysar, is not whether consumers systematically underestimate or overestimate product risks. Rather, that is a "small part of the story, because whatever their risk perceptions might be independent of market influences, consumers will be susceptible to manipulation by manufacturers within the market context,"[77] and "[t]his susceptibility to manipulation produces an opportunity for exploitation that no profit-maximizing manufacturer can ignore."[78] While this claim is later softened by showing evidence that "at least *some* manufacturer manipulation of consumers is occurring in the market consistent with our theoretical prediction,"[79] the policy prescriptions drawn by Hanson and Kysar are much more suited to the broadly stated

72. *Id.* at 693 (citing Steven P. Croley & Jon D. Hanson, *Rescuing the Revolution: The Revived Case for Enterprise Liability*, 91 MICH. L. REV. 683, 706–12 (1993)).

73. *Id.* at 693–94.

74. *Id.* at 696.

75. *Id.* at 716–18 (discussing AM. LAW INST., ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY (1991)).

76. *Id.* at 718–21.

77. *Id.* at 639.

78. *Id.* at 722.

79. *Id.* at 748.

hypothesis than to the more tentative later version.

Third, Hanson and Kysar present their evidence of manufacturer manipulation of consumers' risk assessments. They start by discussing manufacturer manipulation of product perception unrelated to risk in contexts such as gasoline stations and supermarkets,[80] noting that "if manufacturers manipulate perceptions of non-risk-related product attributes, they likely do the same for risk attributes."[81] They then present their case for the existence of manufacturer manipulation of product risk perceptions, noting such practices as labeling a food product as 75 percent nonfat instead of 25 percent fat[82] and direct marketing of pharmaceutical products to physicians and patients.[83] The examples presented do not, however, involve cases that would directly challenge the assumptions of current failure-to-warn law—cases in which risk warnings are provided but the manufacturers manipulate consumer perception of that risk for their own ends (such as avoiding sales reductions or chilling the market). Hanson and Kysar then turn their attention to cigarettes, a product with a sordid marketing history that is well known but recited at great length nonetheless.[84] While the cigarette story provides strong evidence that some profit-maximizing manufacturers can and will manipulate their customers' perception of a product even if such manipulation results in disease and death, it is not clear how that saga makes any more points about failure-to-warn law generally than the more mundane examples of gasoline stations and supermarkets.

Finally, Hanson and Kysar conclude that the existence of such market manipulation justifies enterprise liability:

> Given a state in which consumers do not fully appreciate product hazards, enterprise liability is the most desirable products liability regime because it forces manufacturers, as the primary holders of pertinent product information, to evaluate safety considerations when designing and marketing products. Enterprise liability gives manufacturers an incentive to make all cost-justified investments in product safety because, by doing so, they gain a competitive advantage over firms that do not make the investments (and therefore face higher liability costs). Enterprise liability also represents the only products liability regime

80. Hanson & Kysar, *Some Evidence of Market Manipulation*, *supra* note 12, at 1439–50.
81. *Id.* at 1429.
82. *Id.* at 1451.
83. *Id.* at 1455–59.
84. *Id.* at 1467–1502.

> capable of providing consumers with an independent source of information about expected product accident costs—price.[85]

Even if one accepts the proposition that manufacturers will necessarily manipulate consumer risk perceptions as a profit-maximizing strategy, the case for enterprise liability as the antidote to this economic imperative has some important weaknesses. This is important because, while the Hanson-Kysar analysis of the phenomenon of manipulation of consumer risk assessment is quite extensive, the recommended conclusions paint with a very broad brush.

For one thing, the Hanson-Kysar policy prescription—enterprise liability for product-caused injuries—does not appear to be linked to or limited by problems related to the lack of effective warnings. Rather, the manipulation proposition serves as a justification for enterprise liability not limited to situations in which the tort system would now require a warning. Even if one accepts the entire Hanson-Kysar thesis about the futility of warnings in a world of manipulative manufacturers, it is difficult to see the connection between that thesis and the complete immersion in enterprise liability that they recommend. After all, enterprise liability as they describe it relates to a far larger class of cases than those in which, under current law, a manufacturer might be liable in the absence of a warning. While there are certainly arguments to be made (and debated) to replace our entire tort system for product-related injuries with enterprise liability,[86] the Hanson-Kysar analysis is notable because it relies on a particular type of manufacturer misbehavior (one that Hanson and Kysar might describe as a rational survival technique in the context of a competitive marketplace)[87]—the distortion of consumer risk perceptions by manufacturer manipulation of consumers—to justify enterprise liability for product harm even in cases in which, unlike warning cases, perceptions of risk play no role. Imposing enterprise liability for all product injury cases would result in liability no matter how safe a product is or how difficult it would be to make it safer, thus abrogating not only current concepts of failure-to-warn law but also

85. *Id.* at 1554.

86. The extensive literature includes Geistfeld, *supra* note 13; Jon D. Hanson & Kyle D. Logue, *The First-Party Insurance Externality: An Economic Justification for Enterprise Liability*, 76 CORNELL L. REV. 129 (1990); James A. Henderson, Jr. & Aaron D. Twerski, *Closing the American Products Liability Frontier: The Rejection of Liability Without Defect*, 66 N.Y.U. L. REV. 1263 (1991); and Henderson & Twerski, *supra* note 13.

87. *See* Hanson & Kysar, *Problem of Market Manipulation*, *supra* note 12, at 747 ("As a result, the problem of market manipulation seems inescapable in an unregulated consumer product market. Manufacturers, to survive, *must* behave 'as if' they are attempting to manipulate consumer risk perceptions.").

accepted doctrines of design defect law. Perhaps Hanson and Kysar intended to limit their enterprise liability prescription to the warning context, but such a limit is difficult to find in their articles. In any event, the advantages and disadvantages of enterprise liability more generally in the context of product-related injuries have been debated extensively by others,[88] so we will address the proposal of enterprise liability in the narrower context of warning cases.

The primary basis for Hanson and Kysar's conclusion of the necessity of enterprise liability seems to be that

> because consumers are subject to predictable cognitive processes that depart from rational utility maximization, manufacturers have the opportunity and incentive to manipulate consumer perceptions of product risks. This problem of market manipulation . . . follows from basic economic logic—by lowering consumers' risk estimates, manufacturers concomitantly raise consumers' willingness to pay for their products.[89]

Even if this statement is accurate, the policy prescription that they take from it has several problems.

First, the studies to which Hanson and Kysar point are largely limited to consumers[90] and their buying decisions. Yet, many product-related injuries that arguably could have been prevented by warnings are not the result of consumer buying decisions. Rather, they relate to products bought for a business purpose either by the plaintiff or his or her employer. Is buyer manipulation likely to be as successful in that context? Certainly, as Kahneman and Tversky, among others, have shown us, professionals as a class are not immune to the sort of decisionmaking irrationalities that bedevil nonprofessionals, yet that is not the same as saying that corporate purchasing managers can be as easily or effectively manipulated as consumers who are making single purchases.[91] It is not clear to us whether Hanson and Kysar intend to exclude this large category of injuries (that is, injuries not brought about by manipulation of consumer preferences) from

88. *See, e.g.*, Henderson & Rachlinski, *supra* note 12; sources cited *supra* note 86.

89. Hanson & Kysar, *Response to Market Manipulation*, *supra* note 12, at 262–63.

90. It is possible that Hanson and Kysar use the word "consumer" in its broader sense of anyone who uses a particular product, but the nature of the studies they cite suggests that the term "consumer" is being used in its traditional legal sense to refer to people who enter into a transaction "primarily for personal, family, or household purposes." U.C.C. § 1-201(b)(11) (2003).

91. Even if corporate purchasing managers can be manipulated into underestimating risk on one occasion, it would seem that when the risk matures to injury, as is more likely to occur as the size of the enterprise increases, the professionals—who are repeat players—would be less likely to be fooled again at the time of the next purchase. By way of contrast, most consumers are not repeat high-volume buyers of their products.

their analysis and policy recommendation.

Second, the Hanson-Kysar analysis is based on the assumption that manufacturers have an incentive to manipulate warnings because nonmanipulative warnings would deter purchase of their products or lower the price that consumers are willing to pay.[92] While this assumption has some resonance in certain situations, there are others in which it rings false. For example, it makes sense to assume the existence of some cases in which accurate risk perception might deter purchase (for example, if potential buyers accurately perceived the risks of riding mountain bikes "adventurously," perhaps fewer of them would buy the bikes) or affect the sales price (for example, it is widely believed that automobiles that "sell" a perception of safety—such as Volvo—may command a premium price as compared to comparable cars that do not have the same aura of safety). Cigarettes, the primary focus of one of Hanson and Kysar's articles,[93] fit into the class of cases in which the Hanson-Kysar assumption is intuitively valid. Yet, there are many situations in which the assumption has much less credibility. For example, it does not seem likely to us that a warning on a commercial meat grinder that one's fingers should not be placed in a particular spot near the blades would deter butcher shops (or even home cooks) from buying the meat grinder or from paying more for it. Similarly, a warning on the packaging for a home drain cleaner that it is dangerous to use in combination with other drain cleaners would not seem to reduce sales volume or prices. Some risks, in other words, might be closely connected to product-use decisions but are not closely connected to buying decisions. Yet, Hanson and Kysar seem to generalize from the narrow set of risks that, if accurately perceived, might deter purchase (or chill the purchase price) to the full range of products and their associated risks, including risks that, if accurately perceived, would not deter purchase at all but, rather, would lead to safer postpurchase use. If the incentive to manipulate perceptions of risk is present only when accurate perception of the risk would deter sales or chill prices, however, the foundation for the application of enterprise liability to a broader range of product-related injuries is seriously weakened.

Third, even for unwarned risks that would deter sales or chill prices if

92. Hanson and Kysar make the point explicitly, but without noting the limiting effect it has on their conclusions. *See, e.g.*, Hanson & Kysar, *Problem of Market Manipulation*, *supra* note 12, at 724 ("Other things being equal, it is in the manufacturer's interest for consumers to have the lowest estimate of product risks possible: The lower the consumer's risk estimate, the more consumers will be willing to pay for the product, leading to greater sales and increased profits for manufacturers.").

93. Hanson & Kysar, *Some Evidence of Market Manipulation*, *supra* note 12.

only consumers were not manipulated by manufacturers, the manipulation thesis does not take into account the market incentive of competing merchants to counteract their competitors' spin. There are certainly instances, such as with cigarettes, in which the risk is generically present in the product itself and does not arise from any particular manufacturer's version of it. In such cases, the manufacturers of the risky product each have an incentive to manipulate risk perceptions so more units of the risky product will be sold. In other situations, however, in which the risk is not generic but instead is associated with a particular manufacturer's version of the product, competing manufacturers, seeking greater market share, have an incentive to counteract manipulations of risk perception that were fostered by a competitor. For example, automobile tires vary widely in their ability to stop a car safely in adverse conditions. A manufacturer that wants to "sell safety" has a profit-maximizing incentive to counteract manipulation of risk perception by a competitor whose tires are riskier.[94]

Fourth, even limiting the enterprise liability solution to warning cases, the proponents of the solution do not fully explore the connection between the disease (manufacturers' manipulation of consumers' perceptions of risk) and the proposed cure (enterprise liability). To say that enterprise liability and its concomitant internalization of injury costs create an incentive to manufacture safer products and encourage users to use them safely is undeniably true (except when the internalization costs are so high that the product is discontinued rather than being made or marketed to be safer), but the point proves too much. After all, enterprise liability would provide that same incentive even in the absence of manipulation of risk perceptions. It is the asserted manipulation, however, that is offered as the justification for enterprise liability.

If the goal of enterprise liability were to reduce the incentive of manufacturers to engage in manipulation of risk perception, then one would expect a "good" (that is, nonmanipulative) manufacturer not to face liability in the case of injuries suffered after nonmanipulative disclosure of risks. Yet, the enterprise liability solution would result in such a good manufacturer's being subject to absolute liability nonetheless. Even if, as do Hanson and Kysar, one does not believe that such good manufacturers are likely to exist,[95] enterprise liability will have the effect of not only deterring manipulative risk disclosures, but also of continuing to impose costs on manufacturers who have been deterred by the enterprise liability

94. Hanson and Kysar recognize this counterexample as a theoretical possibility but discount the likelihood of such successful "debiasing." *Id.* at 1551–52.

95. *See* Hanson & Kysar, *Problem of Market Manipulation*, *supra* note 12, at 747.

regime and are now abjuring manipulation. Thus, the enterprise liability solution cannot be justified solely on a wholesome desire to deter manipulation, since its cost would fall on nonmanipulators as well as manipulators. Rather, the manipulation of risk thesis appears to be somewhat of a red herring, rhetorically justifying a solution that is broader than the problem.

Fifth, the proponents of enterprise liability in risk cases tell us that enterprise liability and its accompanying internalization of costs create an incentive for manufacturers to devise effective product warnings (because all injury costs will be borne by the manufacturer), an incentive that is lacking when it is less expensive for manufacturers to manipulate consumers' risk perceptions than it is for them to suffer the decreased profits that might result from nonmanipulative warnings. Yet, the compensation model that is inherent in enterprise liability for warning cases overcompensates plaintiffs and, thus, in the aggregate, overdeters manufacturers and underdeters risky behavior by end users as compared to a world in which manipulation of risk perceptions does not exist and, therefore, enterprise liability as an antidote to such manipulation would not exist either.

Let us assume that a risk associated with a particular product would injure one hundred end users in the absence of an effective warning but would injure only sixty-seven end users if the best possible warning were given.[96] If the manufacturer fails to give an effective warning (or, as Hanson and Kysar might suggest, provides the warning but simultaneously manipulates the perception of risk resulting from that warning so that the warning does not have the proper effect), there would be one hundred injuries and, under enterprise liability, one hundred full compensations even though only thirty-three injuries were caused by the failure to provide the ideal warning (the other sixty-seven users would have been injured in any event). Not only does this result overcharge the manufacturer (charging it for one hundred injuries when only thirty-three were caused by its conduct), but it also leaves undeterred the risky behavior of the end users who did not bother to determine if there were any warnings, or who would have proceeded despite any warnings.[97] If we assume instead that the ideal warning is given by the manufacturer, sixty-seven end users would still be injured. None of those injuries would be caused by the manufacturer; all

96. Presumably, the sixty-seven end users would be an unlucky subset of those who proceeded with a risky use of the product without heeding the warning, either because they failed to read the warning or because they are risk preferring.

97. *See, e.g.*, Henderson & Rachlinski, *supra* note 12, at 225.

were caused by risky end-user behavior. Yet, under enterprise liability, the cost of those sixty-seven injuries would nevertheless be borne by the manufacturer and not the poorly behaving end users. Thus, the end result in both cases is aggregate overcompensation of users and excess liability for the manufacturer. Moreover, the juxtaposition of these two cases presents a counterintuitive situation in which the more that a manufacturer does the "right" thing (by providing an ideal and nonmanipulative warning), the higher the proportion of the damages assessed under an enterprise liability regime that will go to the undeserving.

This mismatch between the goals of the tort system and the compensation regime that would result from enterprise liability in warning cases does not, of course, mean that enterprise liability is an invalid response to the warnings problem. Rather, it is a prescription that should not be supported without acknowledging its weaknesses as well as its advantages. In many ways, enterprise liability for warning cases would have the opposite strengths and weaknesses from the traditional tort model. The traditional model (in which liability is assessed only when it is demonstrated by a preponderance of the evidence that the defendant's wrongful act caused the plaintiff's harm), administered honestly, would likely (as we have argued in the informed consent context)[98] lead to a finding of liability in too few cases—because it is simply too difficult credibly to demonstrate decision causation. On the other hand, the enterprise liability approach would likely result in liability in too many cases—recovery for plaintiffs whose injuries would have occurred even if a good faith, nonmanipulative warning were given. Thus, the case for enterprise liability is in many ways the mirror image of the traditional model—overcorrecting its flaws rather than eliminating them.

A choice between these flawed models, then, is really a choice of which sorts of systematic errors are preferred more than it is a choice of a "better" model over a "worse" one. While many would choose, for understandable reasons, to prefer one sort of error over the other (and we suspect that more would choose overcompensating riskily behaving end users than underdeterring manipulative manufacturers), would it not be desirable to construct a better model than to determine which set of flaws we prefer? That is the subject of the remainder of this Article.

98. *See* Twerski & Cohen, *Informed Decision Making*, *supra* note 4, at 644–45.

V. MERGING FAULT AND CAUSE: THE GATEWAY TO PROPORTIONAL RECOVERY

Having demonstrated that both traditional tort doctrines of causation and the "cures" that have been advanced for them result in seriously flawed, all-or-nothing regimes, we propose a solution in which causation plays a role in the resolution of products liability failure-to-warn cases but does not allow its essential nonjusticiability to choke off recovery in its entirety. The proposals to adopt enterprise liability and the willingness of the courts to adopt heeding presumptions arise in large part from frustration. Courts correctly intuit the unacceptability of a legal regime in which, if causation is to be played "by the book," recovery will rarely follow and manufacturers will lose the incentive to warn altogether or the incentive to warn with sufficient clarity to affect consumer behavior.[99] Consumers are entitled to critical information that can lead them to safer product use; a legal system that offers manufacturers no incentive to provide warnings that would undoubtedly prevent many injuries merely because we cannot determine whether a warning would prevent the harm incurred by any particular injured end user is neither efficient nor humane. This does not mean, however, that all failures to warn should lead to liability (as proponents of enterprise liability–oriented solutions argue) without regard for any causal connection (or lack thereof) between the failure and the injury. A system that allocates the cost of injuries to an actor without regard as to whether its actions bore any causal relationship to those injuries is not only unjust but also leads to suboptimal results.

Thus, it is not our intent to eliminate the important role that causation plays in tort law. Rather, our point is that an inability to prove causation by a preponderance of the evidence should not be the death knell of a failure-to-warn case. Of course, assigning the demonstration of (or failure to demonstrate) causation an important, but not necessarily outcome-determinative, role in adjudication of failure-to-warn cases will require a more nuanced examination of the factors present in each case. In this

99. In *Golonka v. General Motors Corp.*, 65 P.3d 956 (Ariz. Ct. App. 2003), the court expressed concern that

> [i]n light of the difficulty of demonstrating how an injured or deceased person would have reacted to a particular warning, . . . manufacturers who issue products with inadequate safety warnings could escape any consequence, thereby decreasing the incentive for manufacturers to adequately warn consumers of dangers inherent in product use. By easing the burden of proving causation, "[t]he use of the heeding presumption provides a powerful incentive for manufacturers to abide by their duty to provide adequate warnings."

Id. at 969 (alteration in original) (citation omitted) (quoting Coffman v. Keene Corp., 628 A.2d 710, 718 (N.J. 1993)).

regard, it must be recognized that not all failures to warn are created equal. Some warnings are more critical than others. Some warnings deserve greater explication and detail. Some warnings are more or less likely to prevent injury in the context in which the products are used. Thus, rather than the current system, which first determines whether the manufacturer improperly failed to provide a warning and then determines whether there is a causal connection between that failure and the end user's injury, a more thoughtful analysis would start the same way—by determining whether there was a failure to warn—but would then ask how serious the dereliction was. The failure to warn about some dangers or side effects may reflect minor fault or indiscretion, or may be very serious. Under the current litigation scheme, the seriousness of the dereliction is not addressed except obliquely when asking the causation question. It is there that current law tests the seriousness of the failure to warn by asking whether a better warning would have changed the outcome in the *specific case before the court*. But, as we have seen, testing the seriousness of the failure to warn in a fact-specific context leads us nowhere. We cannot and will not know how any individual would have reacted to a hypothetical warning that was not given.

As a result, we propose that failure-to-warn litigation be freed from the unacceptable all-or-nothing shackles of current doctrine and be reformed by the creation of a regime in which causation plays an important role, but not the *only* role, in determining which injuries that follow a failure to warn are compensable. Under our proposal, a manufacturer who has failed to warn under circumstances in which a warning should have been given should be charged with a fraction of the harm following from that failure, with the size of the fraction to be determined by taking into account both the seriousness of the defendant's failure to warn (which necessarily incorporates both the frequency and magnitude of the harm to be avoided) and the likelihood that the warning would have effectively prevented the plaintiff's harm. Such a regime would avoid the extremes of both traditional requirements for causation and the replacements that have been proffered for them. Under our proposal, a manufacturer whose failure to warn is quite serious in light of both the number of likely injuries and the magnitude of such injuries would not escape liability merely because the legal system cannot know with certainty *which* victims would have avoided injury had a warning been given.

It may seem that asking a jury to assess the percentage of responsibility based on a combination of fault and causation is novel, but there is a precedent for it in the context of comparative fault. The

Restatement (Third) of Torts: Apportionment of Liability contemplates a merger of the two concepts in determining the amount of fault to be assigned to each party. Section 8, titled "Factors for Assigning Shares of Responsibility," provides,

> Factors for assigning percentages of responsibility to each person whose legal responsibility has been established include
>
> (a) the nature of the person's risk-creating conduct, including any awareness or indifference with respect to the risks created by the conduct and any intent with respect to the harm created by the conduct; and
>
> (b) the strength of the causal connection between the person's risk-creating conduct and the harm.[100]

Comment c notes that "[t]he comparative strength of the causal connection between the conduct and the harm depends on how attenuated the causal connection is, the timing of each person's conduct in causing the harm, and a comparison of the risks created by the conduct and the actual harm suffered by the plaintiff."[101] If a jury can meld fault and causation for the purpose of determining comparative fault, there is no reason a jury cannot make a similar finding in deciding the portion of responsibility to be borne by the manufacturer for the harm caused to the end user in a failure-to-warn case. We do not propose the adoption of this rule generally throughout the tort system. Rather, we introduce it here because of the nonjusticiability of causation as a stand-alone issue in the failure-to-warn context; in other words, if causation is an element of the case that must be proved or disproved, whichever party bears the burden of persuasion will lose. The fact that we cannot credibly resolve causation by the traditional standard does not mean that we should not adopt a more flexible standard.

Admittedly, factoring causation and fault into a single metric for liability calls for an estimate (or, perhaps, an educated guess) as to the role of the failure to warn in causing the harm suffered by the plaintiff. And having argued that the causation issue is so beleaguered by doubt that it is not justiciable, we can rightly be asked whether our solution simply masks the problem rather than solving it. But the move from an all-or-nothing approach to one of proportional liability allows the legal system substantial flexibility in assessing the role of the defendant in bringing about the plaintiff's injury, and it is this flexibility that enables the system to escape the straitjacket imposed by traditional causation standards and achieve a more just result determined by a holistic view of the manufacturer's

100. RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIAB. § 8 (2000).
101. *Id.* § 8 cmt. c.

conduct and its interplay with the end user.

We would not apply our proposal in all failure-to-warn cases, however. While causation in such cases is, as we have argued in this paper, usually nonjusticiable, there are cases at the margins in which a fact finder can credibly conclude either that an injury would not have occurred had a warning been given or that the warning would not have prevented the injury. To account for such cases, we would return to the traditional role of causation: the court determines that either party has demonstrated by clear and convincing evidence that the failure to warn was or was not causally connected to the end user's injury, and assesses full liability or no liability in such cases without requiring the fact finder to make a combined assessment of fault and causation. While at the extremes causation may be sufficiently clear to permit such an all-or-nothing finding, the great majority of cases fall in the middle where causation cannot be fairly litigated under the traditional standard. These are the cases in which the heeding presumption or lack thereof spells life or death for the plaintiff's case. In these cases our proposal provides a sensible solution to heavy overdeterrence or woeful underdeterrence.

In some respects, there is a parallel between our suggested solution for failure-to-warn cases and the adoption of proportional causation in medical malpractice cases in which a physician fails to timely diagnose a disease. The seminal case is *Herskovits v. Group Health Cooperative*.[102] That case involved a wrongful death action against a hospital and its employees; the plaintiff proved that the defendant physician's negligence in timely diagnosing lung cancer reduced the decedent's chances of survival. Had the plaintiff been treated earlier he would have had a 39 percent chance of survival. Belated treatment reduced his survival chances to 25 percent.[103] At no point in time relevant to the liability issue did the decedent have better than a 50 percent chance of survival. Thus, it could not be established that the delay in diagnosis was "more likely than not" the cause of the decedent's death. Nonetheless, the concurring opinion argued that the plaintiff should be entitled to recovery based on the 14 percent loss of a chance of recovery.[104] A substantial number of courts have adopted

102. Herskovits v. Grp. Health Coop., 664 P.2d 474 (Wash. 1983) (en banc).

103. *Id.* at 475.

104. *Id.* at 487 (Pearson, J., concurring). As we have noted in a previous article, while the court's decision in *Herskovits* to allow partial recovery is laudable, the calculation of the percentage of recovery is questionable. Under the methodology we suggest to calculate the percentage of recovery, the plaintiff's recovery would be 14/75, or 18.67 percent. *See* Twerski & Cohen, *Comparing Physicians*, *supra* note 4, at 24–31.

proportional causation in this genre of cases.[105]

This move away from all-or-nothing causation bears a resemblance to our solution to the causation problem in failure-to-warn cases. In both, unyielding allegiance to traditional causation burden-of-proof norms will negate liability. The *Restatement (Third) of Torts: Liability for Physical and Emotional Harm* notes that

> [t]o date, the courts that have accepted lost opportunity as cognizable harm have almost universally limited its recognition to medical-malpractice cases. Three features of that context are significant: (1) a contractual relationship exists between patient and physician . . . , in which the raison d'etre of the contract is that the physician will take every reasonable measure to obtain an optimal outcome for the patient; (2) reasonably good empirical evidence is often available about the general statistical probability of the lost opportunity; and (3) frequently the consequences of the physician's negligence will deprive the patient of a less-than-50-percent chance for recovery. Whether there are appropriate areas beyond the medical-malpractice area to which lost opportunity might . . . be extended is a matter that the Institute leaves to future development.[106]

The analogy between our proposal and the lost chance cases, though, is limited. In lost chance cases, the seriousness of the defendant's misconduct is not an issue and there is no combined assessment of fault and causation. Rather, the physician's misconduct and the magnitude of the patient's harm are assessed independently, and the amount of responsibility that the physician bears for the harm is reduced based on the probability that the patient would have been in the fraction of patients who would have benefitted from proper treatment. That method of apportioning liability would not be workable in the failure-to-warn context. First, unlike the medical scenario, there are no hard statistics available as to the effectiveness of warnings that might have been given to a particular plaintiff. Second, the relative fault in failing to warn varies significantly

105. *See, e.g.*, Mays v. United States, 608 F. Supp. 1476, 1482 (D. Colo. 1985), *rev'd on other grounds*, 806 F.2d 976 (10th Cir. 1986); DeBurkarte v. Louvar, 393 N.W.2d 131, 137 (Iowa 1986); Delaney v. Cade, 873 P.2d 175, 183 (Kan. 1994); Wollen v. DePaul Health Ctr., 828 S.W.2d 681, 685 (Mo. 1992) (en banc); Perez v. Las Vegas Med. Ctr., 805 P.2d 589, 591 (Nev. 1991); Scafidi v. Seiler, 574 A.2d 398, 408 (N.J. 1990); Roberts v. Ohio Permanente Med. Grp., 668 N.E.2d 480, 484 (Ohio 1996); McMackin v. Johnson Cnty. Healthcare Ctr., 73 P.3d 1094, 1100 (Wyo. 2003). *See also* Joseph H. King, Jr., "*Reduction of Likelihood" Reformulation and Other Retrofitting of the Loss-of-a-Chance Doctrine*, 28 U. MEM. L. REV. 491, 496 (1998) (advocating proportional causation in "loss-of-a-chance" tort doctrine).

106. RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 26 cmt. n (2010).

depending on the danger to be warned against and the efficacy of a warning already given. Our proposal to merge fault and causation into a single inquiry is the only practical method for avoiding the extremes of full liability and no liability. It also allows a jury to make a common sense assessment of the warning and its likely impact on the case at bar. That it is impressionistic is its very strength. The science of warnings is too soft to allow for rigor.

VI. IMPLICATIONS AND RESERVATIONS

We are sure to be asked whether our proposal favors manufacturers or end users. We believe that it favors neither.[107] In cases at the margins, in which there is clear and convincing evidence as to the presence or absence of causation, our proposal does not change current law. In the great middle ground in which causation is not justiciable, however, much will depend on how a fact finder assesses the need for an adequate warning and how effective the warning could have been to deter the harm that the plaintiff actually suffered. This is as it should be. We are not advocating the interests of either manufacturers or product users and have no way to predict whether the aggregate magnitude of partial recoveries under our system will be greater than those under the current all-or-nothing system, although the numbers will likely be close. We are, however, confident that such proportional recovery will lead to a fairer assessment of the need for and the utility of a warning to any given plaintiff.

We do not advocate a similar approach for manufacturing and design defect cases. As noted earlier, the causation issue in both manufacturing and design defect cases is subject to verification by solid scientific evidence. To be sure, experts may disagree as to whether a nondefective product would have reduced or avoided the plaintiff's injury. We have no

107. Whether proportional recovery will lead to more settlements has been a matter of some discussion. *See* Henry Woods, *Trial of a Personal Injury Case in a Comparative Negligence Jurisdiction*, *in* 21 AM. JUR. *Trials* 715, 747–48 (1974) (arguing that defense lawyers in a comparative negligence jurisdiction will be less inclined to refuse settlements when they know that the plaintiff's negligence will not bar recovery); Thomas R. Trenkner, Annotation, *Modern Development of Comparative Negligence Doctrine Having Applicability to Negligence Actions Generally*, 78 A.L.R.3D 339, 350–51 (1977) (claiming that counsel practicing in a comparative negligence jurisdiction may find that cases settle more frequently). Whether increasing the rate of settlements is a positive good has been the subject of sharp debate. *See* Derek C. Bok, *A Flawed System of Law Practice and Training*, 33 J. LEGAL EDUC. 570 (1983) (arguing that law schools should shift focus from litigation to settlement or other types of dispute resolution and claiming that more of the latter would help combat the growing problem of inadequate access to the courts because of unaffordable legal fees); Owen M. Fiss, *Against Settlement*, 93 YALE L.J. 1073, 1075 (1984) (arguing against Bok and calling settlement the civil equivalent to plea bargaining).

reason to believe, however, that hard-fought litigation is incapable of providing a credible answer to the causation issue in the great bulk of manufacturing and design defect cases. For the reasons set forth in this Article, though, we have no confidence whatsoever that causation is justiciable in failure-to-warn cases.

Our proposal admittedly places an additional burden on the trial judge. He or she must decide whether the evidence produced by either the plaintiff or the defendant is sufficient to meet the clear and convincing standard we establish for giving causation its traditional role. The jurors must then be instructed that if they find that the party advocating the all-or-nothing rule has not met the clear and convincing standard, they are then to assess proportional responsibility.[108] The fault-causation issue should be preceded by a question that asks whether the plaintiff has made a case for a failure to warn. If a jury finds no failure to warn, or if a judge finds as a matter of law that a warning was not warranted, there is of course no need to address the question of proportional responsibility.

Although we acknowledge that a trial judge will have to grapple with whether there was sufficient evidence to meet the clear and convincing standard, we do not believe that we are adding much, if anything, to the trial judge's burden. As things stand, judges must decide whether the heeding presumption has been rebutted. As we have demonstrated, that task is very daunting. Judges have little to guide them in dealing with this issue because they face the impossible task of evaluating highly fallible human decisionmaking. It is far easier for trial judges to assess whether the evidence on causation meets the clear and convincing standard. This is a task that they are familiar with in dealing with a broad range of legal issues.[109]

VII. CONCLUSION

Few will argue with the proposition that the causation issue in products liability failure-to-warn litigation needs sensible resolution. The

108. A jury instruction along the following lines would provide the necessary guidance:

> Having found that the defendant failed to provide an adequate warning, you are to assess the likelihood that a reasonable warning would have avoided or reduced the plaintiff's injury. In deciding this question you are first to assess the plaintiff's damages and then take into account the seriousness of the failure to give a warning and the likelihood that the warning would have been effective to have avoided or reduced the plaintiff's injury. You are then to decide the proportion of damages for which you believe the defendant should be liable. You may assign responsibility from 0 percent to 100 percent as you see fit.

109. For a discussion of the most common issues to which courts apply the clear and convincing evidence standard, see KENNETH S. BROWN ET AL., MCCORMICK ON EVIDENCE 569–70 (6th ed. 2006).

dilemma is real. Society rightfully demands adequate warnings on products to reduce the risk of injury. To date, the law has treated all failures to warn to be of equal magnitude, and causation has been the tool utilized to distinguish between failures as to which no liability is assessed and those for which complete liability is assessed. Thus, while the gravity of the manufacturer's failure to warn is not taken into account, the nonjusticiable issue of causation is assigned the lion's share of the work. Yet, in failure-to-warn cases causation is, as we have demonstrated, a seriously flawed tool to accomplish that goal. Our proposal to resolve failure-to-warn cases based on a combination of fault and cause allows the fact finder to assess both the seriousness of the failure to warn and its possible causal implications in a single finding that will determine proportional responsibility. What this solution lacks in elegance it gains by providing some semblance of appropriate deterrence for all failures to warn. After all, warnings are necessary for risky products not because they will save all users from injury, but because they will avoid or reduce injury to some. Our proposal, by focusing on the seriousness of the failure to warn and the possible impact on product users, brings the law a step closer to accomplishing that goal.