Product Liability Tort Reform: The Case for Federal Action

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A product liability law developed in accordance with ... limited federal action ... will bring predictability and stability to the product liability process and help stabilize product liability insurance rates. It will allow consumers to know their rights. It also will give product sellers assurance of "what the rules are," which would encourage research, development and innovation in product manufacturing.1

Product liability is being touted as a national problem that demands a national solution. This Alice In Wonderland approach by "big" business and trade associations is utopian at best.2

I. INTRODUCTION

The lines are drawn for what promises to be one of the most significant tort law battles in recent memory: preemption of state product liability law through federal legislation. The mood of the country, as reflected in federal regulatory budget cuts and a general anti-big-government bias, would seem ill suited to advocacy of federal reform of any kind. This would be especially true of reform tampering with the tort system, which has traditionally been the almost exclusive domain of the states. However, despite the political climate, and the general opposition of the organized bar,3 many members of the legal community, leaders of business and industry, and members of Congress are convinced that federal product liability reform is desirable and essential.4

To grasp the setting for this legal battle, one must appreciate that product liability law is essentially judge-made.5 After many years of common law development, the modern era of product liability arrived with enunciation of the doctrine of strict tort liability in Greenman v. Yuba Power Products, Inc.,6 and the subsequent

3. A summary of the ABA's position can be found in Sevier, Federal Product Liability Act, 11 THE BRIEF 3 (1982). The controversy engendered by federal product liability tort reform is graphically illustrated in this issue, which contains short articles by Professors Schwartz and Ghiardi, writing pro and con on the issue of federal reform.
4. The Product Liability Alliance and the Coalition for Uniform Product Liability each have over 200 member organizations representing broad-based business support. Recently the Product Liability Act, S. 44, 98th Cong., 1st Sess. (1983), had more than 20 cosponsors. See infra notes 467-68 and accompanying text.
6. 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1963). The doctrine was first hinted at in Heningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 69 (1959), a warranty action, but was clearly announced as sounding in tort in Greenman.
incorporation of a product liability cause of action in Section 402A of the Restatement (Second) of Torts. The arrival of strict liability in tort provoked no loud outcry for reform. Until the mid-1970's, strict liability, with its expansion of plaintiffs' rights and remedies for product-related injuries, was generally applauded by commentators. Moreover, since product liability insurance was relatively inexpensive and easy to obtain, and was apparently profitable for insurers, there was only minimal grumbling from the business sector.

During the period from 1974 to 1976, however, the situation changed rapidly. References to a "product liability crisis" swept through major firms, small businesses, and the insurance industry. Many companies complained that product liability insurance was becoming increasingly expensive, and, in some cases, difficult to obtain at any price. This putative crisis, and its aftermath, have engendered considerable criticism of the tort litigation system. The system's detractors argue that the continued development of strict liability has expanded the product manufacturer's potential responsibility for product-related injury, and that the protection offered by traditional defenses has waned, providing little relief from burgeoning liability. As a result of this perceived imbalance in the tort litigation system, manufacturers and insurers have urged state legislatures to enact product liability reform measures, including statutes of repose, "state of the art" defenses, and defenses arising from compliance with government safety regula-

7. The Restatement provides that:

(1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if,

(a) the seller is engaged in the business of selling such a product, and,
(b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.

(2) The rule stated in Subsection (1) applies although

(a) the seller has exercised all possible care in the preparation and sale of his product, and
(b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.


11. See generally Epstein, supra note 8.
tions. Thus far, about half of the states have adopted some form of product liability tort reform, and most states have considered some sort of legislation.

The federal government became involved in this area with the establishment of the Interagency Task Force on Product Liability in 1976. The Task Force contracted with three private research contractors, each of which published a report in the spring of 1977. After the Task Force disbanded, the Department of Commerce continued its work and wrote the Model Uniform Product Liability Act. It was hoped that the Model Uniform Act would achieve widespread state adoption, such as that attained by the Uniform Commercial Code.

Meanwhile, in 1978, Congress modified the tax law to extend loss-carryback provisions for product liability losses from three to ten years. More recently, Congress enacted the Product Liability Risk Retention Act, which facilitates the pooling of reserves by manufacturers to self-insure against product-related claims. However, federal action in the field of substantive product liability tort reform has, to date, been limited to the promulgation of the Model Uniform Act. Although several product liability reform proposals have been introduced in Congress, none has been enacted into law. Notwithstanding this present lack of federal action, and a

13. The exact number of state product liability statutes is difficult to ascertain. In a 1982 publication that contained three short articles on product liability reform each article contained a different figure. Professor Schwartz put the number at 22. Schwartz, supra note 1, at 9. Professor Ghiardi wrote that there were 26 statutes. Ghiardi, supra note 2, at 8. Sevier, writing for the A.B.A., had the highest figure: 28 states. Sevier, supra note 3, at 2.

Certainly, the fact that different writers cannot even agree upon the number of product liability reform statutes the states have enacted serves to demonstrate the degree of uncertainty in this field.

14. The Research Group, Inc., published the seven volume LEGAL STUDY. McKinsey & Co., Inc., prepared the single volume INSURANCE STUDY. The two volume INDUSTRY STUDY was written by Gordon Associates, Inc. The FINAL REPORT of the Task Force was published in November, 1977. These documents will hereinafter be cited respectively as the LEGAL STUDY, INSURANCE STUDY, INDUSTRY STUDY, and FINAL REPORT. The preliminary document prepared by the Task Force was the Briefing Report, which will be cited as the BRIEFING REPORT. A brief account of the Task Force’s work, by its chairman, can be found in Schwartz, supra note 10, at 573-75.

15. The text of the Act, and commentary, can be found at 44 Fed. Reg. 62,714-50 (1979). It should be noted that the Act was promulgated by the Department of Commerce, and not by the National Conference of Commissioners on Uniform State Laws.

slowing of the drive for state reform, pressures are mounting for the federal government to pass comprehensive uniform product liability legislation.

Federal product liability reform initiatives raise many important issues. Opponents of federal reform are concerned about potential disruption of the balance between federal power and states' rights. These concerns merit attention. Nevertheless, this Article urges federal action. The present system of state common law legal development and piecemeal state statutory reform has created a quagmire of uncertainty and exacts high costs from manufacturers, other sellers, insurers, and consumers alike. These costs are unnecessary; in great measure they reflect the price of uncertainty, rather than the cost of compensating injured plaintiffs.

The Article will not explore the merits of specific reform proposals; others have discussed and debated those issues. Rather,


22. See, e.g., Ghiardi, supra note 2.

23. Some have hinted broadly that efforts at product liability reform merely reflect attempts by manufacturers and insurers to deprive injured plaintiffs of their right to adequate compensation for product-related injuries. See, e.g., Johnson, Products Liability Reform: A Hazard to Consumers, 56 N.C.L. REV. 677 (1978). While it is true that manufacturing and insurance groups have been at the forefront of the product liability reform movement, such an argument assumes the conclusion that any legislation adopted would be anti-consumer. Any such blanket assumption is unwarranted, and the final legislative product could be decidedly pro-consumer. This Article argues only that it is manifestly inefficient for insurers, manufacturers, and, ultimately, the consumer, to pay only for unnecessary uncertainty. So long as the legislation, be it plaintiff-oriented, or defendant-oriented, resolves the present crazy-quilt of common law development and state statutory reform, all parties will be better served. Cf. Schwartz, quoted in, Federal Rule One of Many Proposals Eyed in Report to Gov't Advisory Unit, Nat'l. Underwriter, Nov. 19, 1976, at 38.

it addresses the much broader question of the level of government at which reform should be adopted. In reaching the conclusion that federal reform is the preferred solution to the current problems of the product liability system, this Article proceeds in three major sections. The first section illustrates the present degree of uncertainty in the field of product liability law caused by common law judicial creativity, coupled with piecemeal state legislative reform. The second section discusses the adverse effects of uncertainty on insurers, manufacturers, and consumers. The third section demonstrates the need for federal action, analyzing the inherent inability of state law to achieve uniformity and countering objections to federal reform.

II. THE EXTENT OF UNCERTAINTY IN PRESENT PRODUCT LIABILITY LAW

There is little dispute that one of the principal causes of the product liability crisis is the tort litigation system, which "has become filled with uncertainties creating a lottery for both insurance rate makers and injured parties." Despite the generally held

25. Most of these commentators have been concerned only with the merits of particular reform measures. No one has yet looked comprehensively beyond the specifics of the proposals and examined the fundamental question: at which level of our government reform should be adopted. It is true that some commentators have briefly discussed this "level of laws" problem. For example, the theme of uncertainty in the tort litigation system runs throughout the documents prepared under the auspices of the Interagency Task Force. In fact, the initial BRIEFING REPORT of the Task Force stressed that meaningful tort reform must be adopted at the federal level. BRIEFING REPORT, supra note 14, at iv & 19-20. While later reports stressed the desirability of federal reform, see, e.g., 4 LEGAL STUDY, supra note 14, at 71-72, the need for federal reform was expressed in a less emphatic manner. Moreover, the ultimate product of the Department of Commerce, the Model Uniform Product Liability Act, is intended to be adopted on a state-by-state basis. The Model Act has thus far been totally ineffective in achieving uniformity among the states. See infra notes 366-70 and accompanying text. In any event, to the extent the Task Force supported federal reform, it did so in an uncoordinated fashion, scattered through hundreds of pages of documents.

26. BRIEFING REPORT, supra note 14, at iii. See also FINAL REPORT, supra note 14, at xxxix. It should be noted that this "lottery" is a bonanza for legal counsel. A recent study released by the Rand Corporation's Institute for Civil Justice determined, for instance, that in asbestos-related product liability claims closed during the last decade, litigation expenses consumed 63 percent of all money spent by insurers and businesses. Bus. Ins., Aug. 1, 1983, at 25. Argua-
view that the existing system generates uncertainty in product liability law, no single source has previously attempted to outline its major parameters, which include: (1) multiple causes of action; (2) divergent definitions of "defect"; (3) judicial creation and extension of theories of recovery; (4) differences in defenses allowed in strict liability actions; and (5) variations in the admissibility of "subsequent repairs" evidence. Finally, the Article will analyze how state legislative reform efforts have exacerbated existing uncertainties.

One caveat is in order. The purpose of this section is heuristic; it shows by the steadily increasing weight of example the extent of uncertainty in product liability law. The discussion is not intended to represent a definitive state-by-state analysis of current law. Product liability law is simply so uncertain that it would take several volumes even to approach definitive treatment.

A. Multiple Causes of Action

"Product liability" is an overarching term that encompasses at least three distinct causes of action: negligence, warranty, and strict liability.\(^{27}\) These various theories combine to create uncertainty because different jurisdictions often recognize varying combinations of them. Further, a single jurisdiction may apply different theories within the context of a single case.\(^{28}\) This may be especially confusing for juries.

That uncertainty arises from applying different legal theories to the same facts is obvious and requires little discussion. However, one nuance that is often overlooked is that these differing causes of action can complicate something as simple and mechanical as ascertaining the applicable statute of limitations.\(^{29}\) The principal issue is whether the tort or contract statute of limitations will apply. The distinction can be critical. In tort actions the statute usu-
ally runs two years from the date of injury or property damage, with an additional period allowed for the plaintiff to discover the injury or damage. Under a contract statute, however, the period may be more extended. For example, under U.C.C. section 2-725, the period is four years from the date of delivery.\textsuperscript{30} The results have varied, but a few generalizations can be made. In actions based on negligence, the tort statute has usually been applied.\textsuperscript{31} In warranty actions, some courts have applied the contract statute of limitations, but others have employed the tort statute.\textsuperscript{32}

The advent of strict liability in tort failed to curtail this confusion, if only because some jurisdictions have failed to accept the doctrine at all, while others have applied it only in certain situations.\textsuperscript{33} In addition, strict liability provided yet another cause of action and did not supersede product actions based on warranty or negligence.

Finally, the problem of which statute of limitations to apply is exacerbated in cases that involve multistate contracts. For example, cases regularly arise involving contracts with two states. One state may recognize strict liability and the other only warranty.\textsuperscript{34} Because of the uncertainty that permeates the field of conflict of law, this creates additional confusion.\textsuperscript{35}

\begin{footnotes}
\textsuperscript{30} \textit{U.C.C.} § 2-725(1) (1978).
\textsuperscript{33} \textit{See Note, supra} note 31, at 131-32.
\textsuperscript{34} \textit{Id.} at 132.
\textsuperscript{35} The choice of law issue is complicated further when statutes of limitation are characterized as merely procedural, and thus governed by the law of the forum. \textit{See} R. LEFLAR, AMERICAN CONFLICTS LAW § 127, at 252-56 (3d ed. 1977).
 Application of this traditional rule to product liability actions can create special problems:

For example, if a product liability suit were brought in State A, which has a tort statute of limitation, the tort limitation would be used. If in the same suit, however, the substantive law of State B, the state in which the cause of action arose, were to apply, and State B adhered to a warranty cause of action for products liability claims, State A's tort limitation period could conceivably be measured from the date-of-sale of the injurious product, rather than from the date of injury. The result of the interplay of traditional choice of law rules is a hybrid statute of limitation without allegiance to either tort or contract principles.

Note, \textit{supra} note 31, at 133 (footnotes omitted). On the other hand, perhaps the tort limitation, measured from the date of injury, would simply be applied to State B's warranty cause of action. One possible solution is to view stat-
The difficulties created by differing causes of action have been recognized by nearly all of the commentators, who have urged the adoption of a single cause of action. There is an emerging consensus that "[i]f the crisis of uncertainty in the products liability insurance field is to be dealt with effectively, then strong action must be taken to adopt a single cause of action."

B. Differing Interpretations of the Meaning of "Defect"

Differing causes of action provide the most obvious example of uncertainty in the broad field of product liability. But further uncertainty is also created when different jurisdictions apply these causes of action. Regarding the strict liability cause of action, for instance, jurisdictions are widely divided over what constitutes a "defective" product, even though proof of a product "defect" is a sine qua non in strict liability cases.

A large majority of states now recognize the doctrine of strict liability in tort. Section 402A of the Restatement (Second) of...
Torts provides the most commonly accepted formulation of the doctrine: "One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability . . . ." The key words are "defective condition unreasonably dangerous"; the plaintiff must prove that the defendant's product was in such condition in order to recover. The Restatement formulation has caused much difficulty. Promulgated in the infancy of strict tort liability, the Restatement was formulated without the benefit of much common law development, and in many respects did not restate the law of strict products liability so much as state it. The common law development of strict liability, therefore, came after Section 402A was promulgated, with much of that development struggling to give meaning to the concept of "defect."

Unfortunately, the only consensus regarding the present meaning of "defect" is that there is no consensus. The courts have developed numerous formulations, but none has proven entirely satisfactory. California rejects the Restatement's formula that a plaintiff must prove the product to be "unreasonably dangerous" in addition to being "defective." The California courts fear that the words "unreasonably dangerous" might introduce negligence-related considerations into strict liability cases. Wisconsin has

40. Greenman v. Yuba Power Prods., Inc., 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1963), was the first case to consider the doctrine of strict liability in tort. The standard announced was that a manufacturer is strictly liable in tort when its product "proves to have a defect that causes injury to a human being." Id. at 62, 377 P.2d at 900, 27 Cal. Rptr. at 700. The Restatement added the requirement that the defective condition be "unreasonably dangerous." Restatement (Second) of Torts § 402A(1) (1965).
41. Section 402A and the comments following it have been criticized as necessarily leading to divergent results: "[U]nderstandably, these explanations [in the comments] with the circular use of the phrase 'unreasonably dangerous' have led to conflicting judicial interpretations, as well as to numerous suggested readings by the commentators." Sherman, supra note 24, at 362 (footnotes omitted). Others, while recognizing the difficulties with the Restatement definition, seem to take a more charitable view. See Epstein, supra note 8, at 648-49.
42. Sources within which varying positions of the courts and commentators as to the meaning of the phrase may be found in Sherman, supra note 24, at 362-63 nn. 21-22.
44. Id. at 133, 501 P.2d at 1162, 104 Cal. Rptr. at 442. Any such negligence-related considerations were deemed irrelevant. Many courts have favored the Restatement approach over that adopted in Cronin. See, e.g., Kirkland v. Gen-
indicated that the Restatement definition is equivalent to negligence per se.\textsuperscript{45} New York recognizes a cause of action called strict product liability, but the doctrine is essentially negligence-based, and, unlike the Restatement, recognizes contributory negligence as a defense.\textsuperscript{46} Other interpretations are summarized by the Final Report of the Interagency Task Force: "Substitutions for the 'unreasonably dangerous' test include the imposition of liability in Washington if the product is 'not reasonably safe' or, in Oregon, if the product is 'dangerously defective.' Still another view is that the term defective is synonymous with 'unreasonably dangerous.'"\textsuperscript{47}

The definition problem has been especially acute in cases that allege design defects.\textsuperscript{48} The problem of defining "defects" in design cases stems not only from the vagueness of the Restatement's

\textsuperscript{45} Dippel v. Sciano, 37 Wis. 2d 443, 461-62, 155 N.W.2d 55, 64-65 (1967).


\textsuperscript{47} Final Report, supra note 14, at II-7. A brief summary of the various positions can be found at id. II-6 to 8.

\textsuperscript{48} See, e.g., id. at II-6; 2 Legal Study, supra note 14, at 23, 40. The problem of definition does not often surface in manufacturing defect cases: "the product design provides a specific, built-in standard against which to measure the legal adequacy of the particular product that injured the plaintiff." Henderson,
formulation, but also from the inherent difficulty in applying strict liability to design cases. A particular product design represents a conscious choice by a manufacturer. That choice must, therefore, be evaluated in the context of risks known at the time of manufacture, unless a manufacturer is to be held liable for unknowable risks, a position that most courts have been unwilling to take. Thus, most commentators agree that strict liability cases involving design defects are basically indistinguishable from negligence cases, and that they necessarily involve a weighing of the risks and benefits of product designs. Such practices make the potential liability "strict" in name only.

Further, the weighing of risks and benefits in design cases involves consideration of different factors, including the utility of a product, the likelihood that it will cause serious injury, the availability of substitutes, and the ability of manufacturers to increase product safety without reducing product utility. Courts and com-

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50. See, e.g., Final Report, supra note 14, at II-8. See also Henderson, supra note 14, at II-8. Of course, the fact that some courts continue to insist that manufacturers be held strictly liable for their design choices, regardless of whether those choices were reasonable, only adds to the uncertainty. See id. at 634-35. See also Beshada v. Johns-Manville Prods. Corp., 90 N.J. 191, 447 A.2d 539 (1982).


52. A fairly comprehensive list of factors has been developed by Dean Wade:

(1) The usefulness and desirability of the product—its utility to the user and to the public as a whole.

(2) The safety aspects of the product—the likelihood that it will cause injury, and the probable seriousness of the injury.

(3) The availability of a substitute product which would meet the same need and not be as unsafe.

(4) The manufacturer's ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive to maintain its utility.

(5) The user's ability to avoid danger by the exercise of care in the use of the product.

(6) The user's anticipated awareness of the dangers inherent in the product and their avoidability, because of general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instructions.

(7) The feasibility, on the part of the manufacturer, of spreading
mentators, however, disagree on which of these factors (or others) should be considered, or which should be given the greatest weight. This only multiplies the confusion. Of course, deciding design cases upon negligence principles while continuing to adhere to the rubric of "strict liability" is in itself confusing, and likely to lead to unprincipled decisions. The result has been increased reliance on "conclusory expert testimony" in sending design cases to the jury, and thus "the . . . common law approach in design cases is essentially a lottery."

C. Judicial Creation and Extension of Theories of Recovery

Courts can, and do, develop new theories of recovery for product liability plaintiffs, hence new theories of liability for defendants. The most obvious example is the creation of strict tort liability itself. The creation of new theories epitomizes the uncertainty that confronts the product manufacturer. Both manufacturers and insurers necessarily operate in light of existing law, and never know when the courts may thrust new legal theories upon them long after products have been developed and "properly" insured. Courts will also sometimes extend theories of recovery far beyond their existing scope. This section examines two specific examples of judicial creation and extension of theories of recovery.

I. Sindell v. Abbott Laboratories and Its Progeny

Perhaps the most significant recent example of creation of new theories of recovery was the development of the concept of "market share liability" in Sindell v. Abbott Laboratories. The Sindell
PRODUCT LIABILITY

The court required only that the plaintiffs initially join “manufacturers of a substantial share” of the DES which her mother might have produced.
have taken." Should the plaintiffs then prevail, each defendant would be held liable in proportion to its market share.

Sindell represented a major extension of liability against manufacturers of potentially dangerous generic products. It is important to note that the decision is not merely an application of the previously recognized doctrine of alternative liability. Alternative liability allows a plaintiff who is unable to identify which of a group of potentially liable defendants caused his injury to shift the burden to the defendants to prove lack of causation, provided the plaintiff can join all potentially liable defendants in the suit. The Sindell court rejected the application of alternative liability precisely because that doctrine requires each potentially liable defendant to be before the court, it being certain that one of them caused the plaintiff's injuries. Since only five of the more than two hundred companies that produced the drug were before the court, it could not be assumed that any of the five defendants actually produced the product that caused the plaintiff's injury. The court did, however, view its market share theory as an adaptation of the alternative liability theory. In addition, the Sindell court rejected two other proposed theories of liability: a "concert of action" theory, and an industry-wide or "enterprise liability" theory.

DES decisions since Sindell have yielded conflicting results. Various jurisdictions have approached DES cases from a wide variety of theoretical bases. In Abel v. Eli Lilly & Co., the Michigan Court of Appeals ruled that partial summary judgment should not

64. Id. at 612, 607 P.2d at 936, 163 Cal. Rptr. at 145. The court rejected a suggestion by a student commentator that manufacturers comprising at least 75 to 80 percent of the market should be joined as defendants. Comment, DES and a Proposed Theory of Enterprise Liability, 46 FORDHAM L. REV. 963, 996 (1978).
66. See, e.g., Summers v. Tice, 33 Cal. 2d 80, 199 P.2d 1 (1948) (plaintiff shot by two hunters discharging their firearms simultaneously, and could not prove which defendant actually hit him; burden properly shifted to defendants to establish who fired the shot, or to apportion the damages between them). See also Ybarra v. Spangard, 25 Cal. 2d 486, 154 P.2d 687 (1945) (plaintiff injured while operation performed on another part of his body, and unable to prove which defendant injured him; doctrine of res ipsa loquitur applicable despite causation problems as to any one defendant—the circumstances "call upon the defendant to explain the results"). See generally W. PROSSER, supra note 61, at 243; RESTATEMENT (SECOND) OF TORTS § 433B(3) comments f-h (1965).
68. Id. at 603, 607 P.2d at 931, 163 Cal. Rptr. at 139.
69. Id. at 603-10, 607 P.2d at 933-35, 163 Cal. Rptr. at 141-43.
70. 94 Mich. App. 59, 289 N.W.2d 20 (1980). Actually, Abel was decided shortly before the California Supreme Court's decision in Sindell.
have been granted for the defendants against the plaintiff's claim of alternative liability, nor against the plaintiff's claim based upon a concert of action theory. In *Ferrigno v. Eli Lilly & Co.*, a New Jersey Superior Court judge considered the DES question under New Jersey law. The judge ruled that the manufacturer could be held liable on a theory of alternative liability, expressly rejecting Sindell's limitation on that theory that all potential defendants must be brought before the court. The *Ferrigno* judge did, however, adopt Sindell's market share approach to apportion damages. More recently, in *Bichler v. Eli Lilly & Co.*, the New York Court of Appeals affirmed the trial court's award of damages to a DES plaintiff. Noting that the jury had not found the defendant to have been the manufacturer of the DES prescribed for the plaintiff's mother, the court nevertheless affirmed the imposition of liability under a modified concert of action theory. The theory was based on the concept that the defendant and other manufacturers cooperated in the testing and marketing of the DES.

Other courts have refused to hold manufacturers liable in DES cases where causation could not be demonstrated. In *Namm v.*

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71. *Id.* at 73-77, 289 N.W.2d at 25-27. *Abel* did not present the same difficulties regarding alternative liability as *Sindell*. The plaintiffs alleged that the named defendants constituted all of the known DES manufacturers who had supplied the drug during the relevant time period. *Id.* at 67, 289 N.W.2d at 22.

72. *Id.* at 71-73, 289 N.W.2d at 24-25. For a more detailed discussion of the concept of action theory, see Reed & Davison, *The DES Cases and Liability Without Causation*, 19 AM. BUS. L.J. 511, 515-17 (1982).


75. *Id.* at 558, 420 A.2d at 1308.

76. *Id.* at 569-70, 420 A.2d at 1314-15. The court refused to consider the enterprise liability theory, and found the concert of action theory not applicable.

77. *Id.* at 572-73, 420 A.2d at 1316.


79. *Id.* at 319, 436 N.Y.S.2d at 627.

80. *Id.* at 321-31, 436 N.Y.S.2d at 628-33. *Bichler* has since been described as the only DES case to find liability on the concert of action theory. Morton v. Abbott Labs., 538 F. Supp. 593, 597 (M.D. Fla. 1982). A new theory of industry-wide liability has recently been fashioned by the Wisconsin Supreme Court. In *Collins v. Eli Lilly Co.*, 116 Wis. 2d 166, 342 N.W.2d 37 (1984), the court adopted a "risk contribution" approach, under which each defendant drug manufacturer that could have made the pills taken by plaintiff's mother would share in any damage award in proportion to its contribution to the risk created by the industry in marketing the drug. A similar risk contribution theory was proposed in Robinson, *Multiple Causation in Tort Law: Reflections on the DES Cases*, 68 VA. L. REV. 713 (1982).
Charles E. Frosst & Co.,81 a New Jersey intermediate appellate court rejected both the alternative liability and enterprise liability theories. The court expressly disagreed with the Ferrigno judge’s reading of the applicable precedent,82 thus demonstrating the uncertainty new theories can create within a single jurisdiction. Similarly, in Payton v. Abbott Labs,83 a federal district court, applying Massachusetts law, granted the defendant/manufacturer’s motion for partial summary judgment, and refused to adopt concert of action, aiding and abetting, or joint venture theories to get over the causation hurdle.84 The court also refused to consider adopting a more novel approach, such as market share liability, viewing that to be the proper province of the Massachusetts courts, and not a federal district court sitting in diversity.85 Finally, in Ryan v. Eli Lilly & Co.,86 a federal district court refused to bypass the causation requirement by finding a civil conspiracy.87 The court also rejected the concert of action, alternative liability, and enterprise liability theories.88 In addition, the court rejected Sindell’s market share approach, not only because it was not applicable to the facts of the case,89 but also because the approach had no foundation under North Carolina or South Carolina law.90

The DES cases demonstrate graphically how state courts can create new law in deciding product liability cases, and how widely divergent that law becomes as it develops. Moreover, these new theories of liability are not limited to DES cases. They are potentially applicable to any situation in which a fungible product causes an injury, and the manufacturer cannot be identified.91 For example, these theories might be applied in cases involving asbestos, aluminum wiring, and Agent Orange.92

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82. Id. at 32 n.3, 427 A.2d at 1127 n.3.
84. Id. at 1037-39. In Morton v. Abbott Labs., 538 F. Supp. 593 (M.D. Fla. 1982), the court adopted the position taken by Payton that “to support liability under the concert theory, a defendant’s conduct must itself have been tortious.” Id. at 596.
89. The plaintiff had not joined defendants representing a “substantial share” of the market. Id. at 1018.
90. Id. at 1018-19.
91. See, e.g., Reed & Davison, supra note 72, at 515-17.
92. Id. at 519. In an asbestos cases in Georgia, it appears that the “market share” concept will not be adopted, since it would be “contrary to Georgia’s product
2. Extension of the Duty to Warn to Manufacturers and Suppliers of Bulk Products

A second source of uncertainty in product liability law arises when courts extend the parameters of existing theories. The extension of the “duty to warn” to manufacturers and suppliers of bulk products, especially chemicals, illustrates this point.

Chemical products are often manufactured in bulk. They are then sold in tank cars to distributors who drain them off into fifty-five gallon drums and sell them to wholesalers. Wholesalers frequently repackage the chemicals in quart containers and sell them to retailers who in turn purvey them to the general public. By the time a chemical product reaches an ultimate consumer, it may have been through as many as seven or eight steps in the distribution chain. Not only has the product been repackaged, it may have been blended with other chemicals or otherwise remanufactured. If the product injures the ultimate consumer, he may attempt to recover against those in the distribution chain, often for failure to warn. Since the initial manufacturer or a large supplier at the top end of the distribution chain is likely to have the deepest pocket, the issue becomes whether that bulk manufacturer or supplier had any duty to warn the ultimate consumer of potential dangers incident to the product’s use.

As a general matter, most courts have found that a duty to warn extends beyond the immediate purchaser of a product. This view is buttressed by the Restatement (Second) of Torts, which imposes liability for negligent failure to warn, stipulating that “[o]ne who supplies directly or through a third person a chattel for another to use . . .” may be subject to liability. The Comments to liability rule that a manufacturer is not an insurer of his product.” Starling v. Seaboard Coast Line R.R. Co., 533 F. Supp. 183, 190 (S.D. Ga. 1982).

Frumer and Friedman explain that: “There is authority that adequate warning to the purchaser terminates the manufacturers’ liability. But other cases, representing a better and more modern view, hold the manufacturer liable for failure to adequately warn other persons who might be foreseeably subject to danger.” 1 L. FRUMER & M. FRIEDMAN, PRODUCTS LIABILITY 173-80 (1982).

Failure to warn may also form the basis for an action based on strict liability. Id. at § 402A comment j. Despite the great differences between strict liability and negligence theories in cases involving manufacturing defects, the courts have noted that the concepts are not materially different in duty to warn cases. See, e.g., Lancaster, Silo & Block v. Northern Propane Gas, 75 A.D.2d 55, 65, 427 N.Y.S. 2d 1009, 1015 (N.Y. App. Div. 1980); Ortho Pharmaceutical Corp. v. Chapman, 180 Ind. 33, 338 N.E.2d 541 (1979). But see Beshada v. Johns-Manville Prods. Corp., 91 N.J. 191, 204-09, 447 A.2d 539, 548-49 (1982) (strict liability duty to warn, unlike negligence formula, does not require assessment of defendant’s culpability).
this section make it clear that this duty can extend to “those who are members of a class whom the supplier should expect to use it [the chattel] or occupy it or share in its use . . . .”95 Furthermore, it is noted that this duty is not necessarily discharged by providing a sufficient warning only to the immediate person to whom it is supplied: “The question remains whether this method gives a reasonable assurance that the information will reach those whose safety depends on their having it.”96

The courts have, however, recognized exceptions to any duty to warn the ultimate consumer. For example, it has generally been held that drug manufacturers have no duty to warn the ultimate consumer of dangers from prescription drugs.97 The courts reason that an adequate warning to the prescribing physician is usually sufficient.98 Some courts have developed a similar exception for bulk suppliers and manufacturers, arguing that any duty to warn is discharged by an adequate warning given by the supplier or manufacturer to the immediate purchaser.99 Other courts have rejected any such exception, and have found that the bulk manufacturer or supplier’s duty can properly extend to the ultimate user or consumer.100 These latter cases have tended to avoid a duty analysis and have viewed the question as being one going to the overall adequacy of the warning—a question for the jury. However, closer examination of two of these cases reveals remarkably different approaches.

In Jones v. Hittle Service, Inc.,101 bulk suppliers of propane gas were joined as defendants with a retail distributor in a case involving a gas explosion. Propane gas manufactured and supplied by the various defendants had escaped from a leaky pipe, and traveled through two feet of earth, collecting in a storm cellar. As it

95. RESTATEMENT (SECOND) OF TORTS § 388 comment a (1965).
96. Id. at comment n.
filtered through the earth, much of the odor added to the gas was absorbed. The plaintiff’s decedents went to the storm cellar to get some tomatoes stored there. One of them lit a match and the gas exploded, causing their deaths. The plaintiff argued that the defendants failed to warn adequately of the propensities of the gas. The court disagreed, and affirmed summary judgment for the bulk suppliers:

A bulk supplier to a retail distributor is in an entirely different position from one who sells packaged commodities or deals directly with the consumer. If the goods are packaged it is entirely feasible for the manufacturer to include an appropriate warning on the package. . . . If the product is sold in bulk, adequate warning to the vendee is all that can reasonably be required.102

A vastly different approach is illustrated by Shell Oil Co. v. Gutierrez.103 In Gutierrez, Shell, the manufacturer, sold a chemical in tank cars and trucks to its distributor, which transferred the product to storage tanks and then packaged it in fifty-five gallon drums. The distributor labeled these drums, indicating they contained a “FLAMMABLE LIQUID,” and resold the product to Westinghouse, the plaintiff’s employer. After Westinghouse emptied the drums, they should have been returned immediately for refilling, or at least rinsed out and tightly capped. Westinghouse, however, was apparently not careful in handling the drums, and one of the plaintiffs used a drum to make a makeshift scaffolding to perform welding in the yard. When he lit his torch the drum exploded, causing severe injuries to the plaintiffs. The plaintiffs sued those in the distribution line, including Shell.

Unlike the court in Jones, the Gutierrez court held that Shell’s duty could extend to the ultimate consumer:

Shell being a bulk supplier in car load lots and not having direct access to the container does not insulate it against liability. Labeling the container is but one of the methods which may give adequate warning. . . . Lack of access to the final form in which the product reaches the user is simply one of the considerations bearing upon the existence and extent of duty.104

Both the legal analysis and the outcome differ in Jones and Gutierrez. In Jones, the appellate court affirmed summary judgment for the defendant. In Gutierrez, the appellate court affirmed a $2,000,000 jury verdict for the plaintiffs. These cases exemplify the uncommon ways common law state courts extend existing liability theories.

102. Id. at 637, 549 P.2d at 1393.
104. Id. at 434, 581 P.2d at 279.
D. Varying Defenses Allowed in Strict Liability

Courts in the various jurisdictions have further promoted tort uncertainty by their handling of defenses allowed in product liability cases. This has been especially true in cases predicated on strict tort liability. So widely does the law vary from state to state that few accurate generalizations can be made concerning the defenses that courts will allow.

The current state of the law might be summarized in the observation that contributory negligence is not a defense to strict liability actions, but that misuse and assumption of risk are. Such a summary, however, would ignore jurisdictions in which contributory negligence may be a defense, or where the contributory negligence bar has been replaced by comparative fault concepts.

106. That is, voluntarily and knowingly encountering a product-related danger. This is the rule of the Restatement:

Contributory negligence of the plaintiff is not a defense when such negligence consists merely in a failure to discover the defect in the product, or to guard against the possibility of its existence. On the other hand the form of contributory negligence which consists in voluntarily and unreasonably proceeding to encounter a known danger, and commonly passes under the name of assumption of risk, is a defense under this Section as in other cases of strict liability. If the user or consumer discovers the defect and is aware of the danger, and nevertheless proceeds unreasonably to make use of the product and is injured by it, he is barred from recovery.

Restatement (Second) of Torts, § 402A comment n (1965). See generally Annot., supra note 56.
It would also fail to account for states that disallow misuse as a defense,\textsuperscript{109} and those that have created other defenses through legislation, such as a "state of the art defense."\textsuperscript{110} Finally, such an abbreviated description of current law would overlook the fact that courts differ widely in how they define commonly accepted defenses like assumption of risk.\textsuperscript{111} A closer examination of some of these issues will illustrate the degree of uncertainty.

At present, most jurisdictions allow misuse to be asserted as an affirmative defense, if the use of the product by the consumer is not one that the manufacturer could have reasonably foreseen.\textsuperscript{112} Since this defense in effect goes to the issue of causation (i.e., that the plaintiff's misuse caused his injury), some states have refused to recognize it.\textsuperscript{113} For example, Pennsylvania holds misuse is not a separate defense in strict liability cases and that evidence of misuse can be used only to rebut the plaintiff's claims about defectiveness and proximate cause.\textsuperscript{114} Some states, on the other hand, appear to hold that the plaintiff must prove freedom from unforeseeable misuse.\textsuperscript{115}

In those jurisdictions that allow the misuse defense, the crucial element is foreseeability, which is usually considered a question of fact for the jury.\textsuperscript{116} Thus, the type of conduct held to constitute

\begin{footnotes}
\footnote{109}{See infra notes 112-19 and accompanying text.}
\footnote{110}{See infra notes 127-39 and accompanying text.}
\footnote{111}{See infra notes 119-26 and accompanying text.}
\footnote{114}{See, e.g., Hughes v. Magic Chef, Inc., 288 N.W.2d 542, 546 (Iowa 1980).}
\footnote{115}{See, e.g., Keener v. Dayton Elect. Mfg., 445 S.W.2d 362, 366 (Mo. 1969).}
\end{footnotes}
misuse varies widely. The misuse issue frequently arises in "second impact" automobile collision cases. In these cases, the plaintiff is suing, not for injuries from the initial collision, but for aggravation of the initial injuries caused by the automobile's design in the "second collision" between the plaintiff and the automobile's interior. The courts have split on whether an automobile collision is a "foreseeable misuse," requiring a manufacturer's design to safeguard the plaintiff from injuries suffered in "second collision."

The recognition of defenses often hinges upon how the plaintiff's conduct is characterized. Courts vary widely in their characterization of particular misconduct. For example, automobile manufacturers often seek to prove that the automobile operator in a collision case was driving at an excessive speed or "under the influence." Some courts have characterized such misconduct as contributory negligence, and thus not a defense to strict liability actions. Other courts, however, have characterized the same misconduct as misuse or assumption of risk and have recognized the defense.

The precise applicability of assumption of risk is uncertain, since it has been defined in different ways. For example, states differ over whether assumption of risk should be viewed objectively or subjectively. Courts adhering to the subjective view require proof that the plaintiff had actual knowledge of the danger before voluntarily encountering it. At least four jurisdictions seem to require proof that the plaintiff subjectively appreciated the risks.


118. Compare Larsen v. General Motors Corp., 391 F.2d 495 (8th Cir. 1968) (allowing recovery) with Evans v. General Motors Corp, 359 F.2d 822 (7th Cir.) (barring recovery), cert denied, 355 U.S. 836 (1968). The Larsen view now seems to be clearly the majority view. For a general discussion of the issue and citation of authority, see R. Hursh & H. Bailey, 1 American Law of Products Liability 758 (2d ed. 1974); W. Kimble & R. Lesher, supra note 105, at 273, 280-85.


120. See, e.g., Atkins v. American Motors Corp., 335 So. 2d 134, 143 (Ala. 1976) (assumption of risk may be asserted where "danger was either apparent to the consumer or the seller adequately warned the consumer of the danger"); Caterpillar Tractor Co. v. Beck, 593 P.2d 871 (Alaska 1979) (assumption of risk limited to conduct that demonstrates knowledge of the defect); Gangi v. Sears, Roebuck & Co., 33 Conn. Supp. 81, 84, 360 A.2d 907, 909 (1976) (assumption of risk applicable where "a reasonable person ought to have comprehended the nature and the extent of the peril"). See generally S. Baldwin, F. Hare & F. McGovern, The Preparation of a Product Liability Case 125-26 (1981).

121. See S. Baldwin, F. Hare & F. McGovern, supra note 120, at 125-26.
involved. Each one of these states, however, describes this standard in a different way. In Colorado, the courts have held that assumption of risk requires "knowledge of the specific dangers arising out of the precise defects asserted." The plaintiff, in other words, must know exactly what risks he is taking in using a particular product. Montana described the attributes of its subjective standard somewhat differently, requiring proof that the plaintiff not only realized the existence of a danger or defect and voluntarily encountered it, but also that he appreciated the risk (probability of harm) involved. Most states add the objective requirement that the defendant prove that the plaintiff unreasonably used the product, that is that the plaintiff was negligent. The variety of definitions means that the defendant will, depending on where the case arises, have to meet a different burden of proof. Thus, the defense is either very powerful or not readily available.

Like the other defenses, the so-called "state of the art" defense suffers from both a lack of definition and inconsistent application. The defense is subject to considerable misunderstanding, since it is not an affirmative defense in the usual sense. The term "state of the art" usually refers to at least two types of evidence: (1) the knowledge available to the industry producing a certain product, and (2) common production practices used in an industry. Courts in various jurisdictions have either accepted or rejected such evidence when introduced by defendants to negate the plaintiff's proofs of defectiveness. Thus, if allowed, it provides a general defense to the plaintiff's case in chief, but does not function in the same fashion as an affirmative defense, such as the assumption of the risk.

The current state of the law seems to be that, in unavoidably unsafe product cases, or those dealing with the adequacy of warn-

126. Id.
127. Id. at 132.
128. J. BEASLEY, PRODUCTS LIABILITY AND THE UNREASONABLE DANGEROUS REQUIREMENT 393 (1981). The second type, merely adopting industry standards, has been frowned upon since Judge Learned Hand's opinion in The T.J. Hooper, 60 F.2d 737, 740 (2d Cir. 1932).
129. See J. BEASLEY, supra note 128, at 393.
ings, state of the art evidence is either admissible and conclusive,\textsuperscript{130} or inadmissible.\textsuperscript{131} The basic rationale behind excluding such evidence has been recently summarized by the New Jersey Supreme Court. In \textit{Beshada v. Johns-Manville Products Corp.,}\textsuperscript{132} the defendants argued that it was unreasonable to impose a duty to warn of unknowable risks.\textsuperscript{133} The court conceded that in \textit{negligence} cases failure to warn of an unknown risk is not unreasonable.\textsuperscript{134} The court reasoned, however, that in a strict liability action, the \textit{reasonability} of the manufacturer's \textit{conduct} was not at issue. Rather, the court focused on the \textit{safety} of the \textit{product} without an adequate warning.\textsuperscript{135} Since consumers could not protect themselves without an adequate warning, the court concluded that the basic policies behind strict liability\textsuperscript{136} required the defendant's state of the art defense to be stricken.\textsuperscript{137}

State legislatures have also entered the field, passing product liability reform legislation that includes state of the art provisions.\textsuperscript{138} Without really defining the term "state of the art," these state laws create either an affirmative defense, or a rebuttable presumption, that a product is free from defects if in compliance with the state of the art at the time it was manufactured.\textsuperscript{139} The current state of the law, therefore, includes a mixture of common law doctrines and statutory provisions relating to state of the art, many of which directly contradict one another.

A final example of uncertainty relating to defenses involves one of the most widely discussed topics in product liability law in recent years: the application of comparative negligence statutes or comparative fault concepts to strict liability actions. A majority of jurisdictions now subscribe to the comparative negligence doctrine, which essentially eliminates the absolute defense of contrib-

\textsuperscript{130} \textit{E.g.}, Tomer \textit{v. American Home Prods. Corp.}, 170 Conn. 681, 687, 368 A.2d 35, 38 (1976). \textit{See generally J. Beasley, supra note 128, at 403.}


\textsuperscript{132} Id.

\textsuperscript{133} Id. at 203, 447 A.2d at 546. Actually there is a difference between situations in which a potential \textit{danger} is not discoverable by present scientific methods, and those in which the danger is known, but \textit{technology} is not available at the time of manufacture to prevent the danger. \textit{See P. Sherman, supra note 117, at 267.} The \textit{Beshada} rationale against allowing state of the art evidence would seem to apply to both situations in strict liability action.


\textsuperscript{135} Id.

\textsuperscript{136} Id. at 209, 447 A.2d at 549.

\textsuperscript{137} Id. \textit{The Beshada} court is obviously at odds with those courts that hold that strict liability is indistinguishable from negligence in duty to warn cases. \textit{See supra note 94.}

\textsuperscript{138} \textit{See J. Beasley, supra note 128, at 408-09.}

\textsuperscript{139} \textit{See infra} notes 191-92 and accompanying text.
utory negligence in negligence cases and considers the plaintiff's misconduct only in mitigation of damages. Most states have accomplished the change to comparative negligence through legislation, although some states have adopted the doctrine judicially.

There are two basic types of comparative negligence. The first is the so-called "pure" comparative negligence approach, generally favored by the commentators. Under a "pure" comparative negligence scheme, a plaintiff may recover regardless of his degree of fault in relation to that of the defendant. Thus, a plaintiff who is ninety-nine percent at fault can still recover one percent of his damages from the defendant. The second type is the "modified" comparative negligence approach, which can itself be divided into two major approaches. One version allows a negligent plaintiff to recover proportionately, unless the plaintiff's degree of negligence is greater than the defendant's. Under this variant, if the plaintiff's degree of negligence is greater, he is completely barred from recovery. A second version is slightly more restrictive and bars a plaintiff from recovery if the plaintiff's negligence is equal to the defendant's.

The meshing of comparative negligence with strict liability has caused considerable uncertainty and confusion. The basic problem is that most statutes speak of comparative negligence. Strict liability, the argument goes, imposes liability on defendants regardless of negligence, while comparative negligence necessarily requires comparing the defendant's negligence with the plaintiff's. Thus, it is argued, it is incongruous to attempt to compare negligence in strict liability cases, since the defendant need not be negligent at all in order for the plaintiff to recover. Several courts have accepted this argument, and have refused to apply comparative negligence principles to strict liability. On the other hand,
many courts have reached the opposite conclusion and have applied comparative negligence principles to strict liability, reasoning that fault can often be compared. Even these courts have varied widely in their approach. Some have found their comparative negligence statutes applicable to strict liability actions.\textsuperscript{147} Others have \textit{judicially} applied comparative negligence principles to strict liability actions.\textsuperscript{146} Finally, a few courts have applied comparative negligence principles to strict liability, but will not reduce a plaintiff's recovery when the plaintiff's fault consists merely of failing to discover or guard against product defects.\textsuperscript{149} And, in those states that apply comparative negligence principles to strict liability actions, additional uncertainty is created because some apply pure comparative negligence,\textsuperscript{150} while others use a modified comparative negligence approach.\textsuperscript{151}

Since comparative "negligence" is such an inappropriate label, courts that apply comparative negligence principles to strict liability now speak in terms of "comparative fault" or "comparative con-


\textsuperscript{148} E.g., Butaud v. Suburban Marine & Sporting Goods, Inc., 555 P.2d 42 (Alaska 1976); Daly v. General Motors Corp., 20 Cal. 3d 725, 575 P.2d 1162, 144 Cal. Rptr. 380 (1978). California and Alaska are among the handful of states that have judicially adopted comparative negligence. \textit{See supra} note 141 and accompanying text. Naturally, they also extended comparative negligence principles to strict liability by judicial decision. However, in Thibault v. Sears, Roebuck & Co., 118 N.H. 802, 808-10, 395 A.2d 843, 848-49 (1978), New Hampshire judicially applied modified comparative negligence principles to strict liability cases, even though the court held the state's comparative negligence statute by its terms inapplicable to strict liability cases.

\textsuperscript{149} E.g., West v. Caterpillar Tractor Co., 336 So. 2d 80 (Fla. 1976); Busch v. Busch Constr., Inc., 262 N.W.2d 377 (Minn. 1977). \textit{See generally} Annot., \textit{supra} note 146, at 648-49 (1981).


\textsuperscript{151} Of course, a state that applies a comparative negligence statute to strict liability actions will be constrained to utilize the form of comparative negligence embodied in that statute—which is often modified comparative negligence. \textit{See}, e.g., Suter v. San Angelo Foundry & Mach. Co., 81 N.J. 150, 161, 406 A.2d 140, 144 (1979); Baccelleri v. Hyster Co., 287 Or. 3, 10-11, 597 P.2d 351, 354 (1979); Dippel v. Sciano, 37 Wis. 2d 443, 452, 155 N.W.2d 55, 56 (1976).
tribution.” This change in terminology is welcome, since it at least recognizes that “negligence” is not involved.

The comparative fault cases provide an excellent example of the uncertainty that currently exists in state product liability law. First, the courts are widely divided on the question of whether to apply the concept to strict liability cases at all. Second, when the concept is applied, it is applied under varying formulas. A state’s comparative negligence law often dictates what form of comparative fault will be applied, since courts will frequently simply apply their comparative negligence statutory scheme to strict liability actions. The problem is that these statutes also vary widely, so the confusion persists, at least at the national level. A state court may also find a comparative negligence statute inapplicable to strict liability and yet adopt by judicial fiat a form of comparative fault for product liability actions. The potential variations are endless and the resulting confusion and uncertainty enormous.

E. Admissibility of “Subsequent Repairs” Evidence

The preceding subsections have outlined major areas of uncertainty in the law of product liability. Countless minor differences in product liability doctrine exist between the various jurisdictions. One deserves special consideration because the courts have reached such differing conclusions, and because the issue arises so frequently in product liability trials. It is whether plaintiffs can introduce evidence of “subsequent repairs.”

The basic issue is whether plaintiffs in strict liability actions may introduce evidence of subsequent safety improvements to establish that a product was defective when manufactured. A majority of states appear to follow the policy of the Federal Rules of Evidence disallowing introduction of subsequent product repairs or improvements in negligence actions. However, Federal Rule 407, and similar state rules, speaks of “negligence or culpable conduct,” and since the care or culpability of the manufacturer is not part of the plaintiff’s case in strict liability actions, some jurisdictions do not apply the exclusionary rule to strict liability ac-

152. See, e.g., Daly v. General Motors Corp., 20 Cal. 3d 725, 735-36, 742, 575 P.2d 1162, 1167-68, 1172, 144 Cal. Rptr. 385-86, 390 (1978).
153. See Schwartz, supra note 1, at 9, 11 n.3 and cases cited therein.
155. The Rule states: “When, after an event, measures are taken which, if taken previously, would have made the event less likely to occur, evidence of the subsequent measures is not admissible to prove negligence or culpable conduct in connection with the event . . . .” Fed. R. Evid. 407.
tions. These courts admit evidence of subsequent repairs when offered to prove the existence of a defect as part of the plaintiff's case in chief.

California and New York, both leading jurisdictions in product liability law, are proponents of this position. In Ault v. International Harvester Co., the California Supreme Court held that evidence of subsequent design changes or modifications was admissible to prove prior defects. The New York Court of Appeals reached the same conclusion in Caprara v. Chrysler Corp. In Caprara, the court rejected the argument that admitting evidence of subsequent repairs will deter manufacturers from making their products safer. The court reasoned that certain aspects of our economic system, such as mass marketing, insurance, and increasing government regulation, all militate against any assumption that manufacturers will refrain from product improvement unless shielded by the evidence rule. In addition, both Ault and Caprara noted that manufacturers' self-interest in avoiding future litigation will encourage them to make improvements regardless of the exclusionary rule.

Other courts, however, take a different view, largely because of public policy reasons. These courts, contrary to Ault and

158. But see Grenada Steel Indus., Inc., v. Alabama Oxygen Co., 695 F.2d 883 (5th Cir. 1983) (evidence of post-accident design changes properly excluded under the federal rules, in addition to its lack of probative value and misleading nature).


161. Id. at 121, 528 P.2d at 1151-52, 117 Cal. Rptr. at 816.


163. Id. at 126, 417 N.E.2d at 550, 436 N.Y.S.2d at 256.

164. Id. The Ault court took the same position:

When the context is transformed from a typical negligence setting to be the modern products liability field, however, the "public policy" assumptions justifying this evidentiary rule are no longer valid. The contemporary corporate mass producer of goods, the normal products liability defendant, manufactures tens of thousands of units of goods; it is manifestly unrealistic to suggest that such a producer will forego making improvements in its product and risk innumerable additional law suits and the attendant adverse effect upon its public image, simply because evidence adoption of such improvement may be admitted in an action founded on strict liability for recovery on an injury that preceded the improvement.


166. See, e.g., Columbia v. Puget Sound R.R. v. Hawthorne, 144 U.S. 202, 208 (1892)
Caprara, reason that admitting evidence of subsequent repairs deterred manufacturers from making product improvements, because juries will conclude that such evidence is more prejudicial than probative, and have concluded that these policy reasons mandate exclusion in strict liability actions as well as in negligence suits.

Federal courts of appeal are split on the admissibility issue. Regardless of a particular circuit's position, however, a federal court sitting in diversity may take a different position than the state in which it is sitting, despite the Erie doctrine. This is so because state rules of evidence may be considered procedural and not binding on the federal court. For example, in Cann v. Ford Motor Co., the Court of Appeals for the Second Circuit did not follow Caprara, but rather articulated its own view of the proper rule.

F. Overlying Common Law Development With State Statutory Reform

Many states have adopted new product liability legislation designed to reform the common law system. Although the merits of the various statutes have been debated at length by the legal

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(allowing admission of evidence of post-accident alteration and repair would induce further negligence); Werner v. Upjohn Co., 628 F.2d 848, 855-56 (4th Cir. 1980) (bar against use post-accident precautionary measures protects public; encourages product improvement without fear such precautions to be used in lawsuit); Reddick v. White Consol. Indus., 295 F. Supp. 243, 247 (S.D. Ga. 1968) (evidence of post-injury precautionary measures inadmissible; contrary to public policy); Mabe v. Huntington Coca-Cola Bottling Co., 145 W. Va. 712, 717, 116 S.E.2d 874, 877-78 (1960) (evidence of post-injury precautions not to be construed as admission of guilt).

167. See generally Madden, Admissibility of Post-Incident Remedial Measures: A Pattern Emerges, 5 J. PRODS. LAB. 1, 2-3, 9 (1982).


170. In Erie R.R. Co. v. Thompkins, 304 U.S. 64 (1938), the Court held that a federal district court hearing a diversity case must apply the law of the state in which the court is sitting. See infra note 399.

171. 658 F.2d 54 (2d Cir. 1981).

172. Id. at 60. See generally L. Frumer, Recent Developments in Product Liability Law, SMU PROD. LIAB. INST. 1-2, 1-3 (V. Walkowiak ed. 1982).
community,173 no one has seriously suggested that these reforms have led to certainty in the tort litigation system. The available evidence suggests just the opposite: that state efforts have exacerbated the problem of uncertainty.174

First, there has been no general agreement as to which problems require statutory solutions. Many differing legislative approaches have been enacted. Probably the most popular reform is the “statute of repose,” adopted in at least twenty-two states.175 A statute of repose is similar to a statute of limitations, but typically runs from the date of sale rather than from the time of injury or from when the injury reasonably should have been discovered.176 Another statutory reform, adopted in at least seven states,177 creates a defense based upon modification or alteration of a product by the consumer or user. Other reforms recognize defenses if the product complied with the state of the art at the time of manufacture178 or with government safety regulations. Lesser reforms include elimination or modification of the collateral source rule,179 elimination or limitation of ad damnum clauses in complaints,180 and limitations on the introduction of evidence regarding subsequent design change.181

Second, once a particular statutory solution is chosen there is no agreement among the states as to the specific terms of the legislation. The statutes of repose are an excellent example.182 These

173. See supra note 24.
178. See supra notes 127-39 and accompanying text.
179. See, e.g., ALA. CODE § 6-5-520, 6-5-522 (Supp. 1982).
182. E.g., ALA. CODE § 6-5-502(a) (Supp. 1982); COLO. REV. STAT. § 13-80-127.6(1)(b) (Supp. 1983); CONN. GEN. STAT. ANN. § 52-577a(a) (West Supp. 1983); FLA. STAT. ANN. § 95.031(2) (West 1982); GA. CODE ANN. § 105-106(b) (2) (Supp.
vary widely in length, from six to twelve years. Some create a rebuttable presumption that a product is not defective after passage of a certain number of years; others create an absolute defense. Moreover, these statutes may or may not apply to actions in negligence and warranty. If the statutes do not so apply, the confusion presently surrounding multiple causes of actions and the application of statutes of limitation to different theories of recovery in product cases will persist. One commentator suggests that in cases with multistate contacts statutes of repose will probably become academic: choice of law rules will allow the plaintiff to choose a forum with a more favorable traditional statute of limitations. Finally, statutes of repose have been attacked as violating state constitutions. The net result "has been to exacerbate...
the wide disparity in legal principles which govern the outcome of product liability lawsuits depending upon the jurisdiction in which they are brought."189 As a result, "[s]tate legislation of this sort is liable to lead to a jungle of anomalous and complicating provisions."190

Other types of legislative reform vary greatly from state to state. For example, proof of compliance with the "state of the art" establishes an absolute defense in some states,191 but only a presumption of lack of defect in others.192 Several only allow the defendant to introduce evidence of compliance with the state of the art.193 Likewise, product modification or alteration is an absolute defense in some jurisdictions,194 but in others is considered a defense only if the court determines that the particular modification or alteration was not foreseeable.195 Regardless of the specific approach taken, minor variations of substance and phrasing in every statute compound the uncertainty fostered by the basic dichotomies. Insurers, manufacturers, and injured consumers—who would take solace in increased certainty of product liability law—will not find much comfort in the present state-by-state legislative reforms.

III. EFFECTS OF UNCERTAINTY IN THE TORT LITIGATION SYSTEM UPON INSURERS, MANUFACTURERS, AND CONSUMERS

The current state created edifice of product liability uncertainty


190. S. WADDAMS, PRODUCTS LIABILITY 252 (1980). Prof. Schwartz has observed that "state legislation appears to have fueled uncertainty. Although the 17 state laws that have been enacted deal with a number of similar general topics such as statutes of limitations, they vary in important details." Schwartz, supra note 10, at 585.


is not imposing per se. A departure from the present state-by-state approach to product liability would be warranted only if these uncertainties impose unnecessary burdens on affected groups. The purpose of this section of this Article is to argue that such unnecessary burdens have, in fact, resulted.

Any discussion of the effects of product liability uncertainty upon the three most affected groups—insurers, manufacturers, and consumers—can hardly be definitive, since the boundaries of uncertainty are not susceptible to rigid definition. Furthermore, misinformation about product liability law is rampant and uncertainty exacts psychological as well as financial costs. Accordingly, the full costs that uncertainty exacts on insurers, manufacturers, and consumers are impossible to calculate.

However, an examination of the effects of uncertainty can have considerable value since the basic problems of each group are the same nationwide. Many products are marketed or advertised on a national basis. Even where a particular product is not marketed nationally, chances are very high that the product will be sold in at least several states. In response, product liability insurance rates are set on the basis of national experience. What distinguishes product liability law from other areas, therefore, is that the state of the law leaves no insurer, manufacturer, or consumer unaffected. Due to the inherently national effects of product liability law, this area appears especially ill-suited for piecemeal, state-by-state development. Since product liability law has generally followed the path of the common law, however, it is appropriate to weigh the present system's impact on insurers, manufacturers (and other sellers), and consumers.

A. Uncertainty And Its Effect on Product Liability Insurers and Insurance Buyers

Before discussing the impact of uncertainty on product liability insurance, two preliminary matters require consideration. The first is a recognition of the primary importance of insurance in the product liability field. Product liability insurance is a mechanism for transferring risk from one party (the manufacturer or business-
man) to another (the insurer) and distributing that risk among the other policyholders and, ultimately, to the consumer. Thus what the insurer does in the nature of ratemaking or underwriting decisions necessarily impacts both manufacturers and product liability claimants. If the manufacturer or businessman has insurance, that fact will have a bearing on whether a claimant will settle or sue. On the other hand, if the manufacturer or businessman has no insurance, the claimant may be precluded from recovery if the manufacturer or businessman has inadequate resources to pay the judgment.

A second important preliminary matter concerns the question of whether insurers have created their own insurance-related product liability problems. For example, the Federal Interagency Task Force listed insurance ratemaking practices as one of the three principal causes of product liability problems. Moreover, product liability insurance has traditionally been written as part of a comprehensive policy covering other aspects of a manufacturer's or business's insurance needs. This has made it difficult to obtain adequate information concerning, among other things, the profitability of product liability insurance. Because of this paucity of reliable information, insurers have recently attempted to segregate product liability data from the general business policies

199. See, e.g., In re Smiley's Estate, 35 Wash. 2d 863, 867, 216 P.2d 212, 214 (1950): "A contract may be a risk shifting device, but to be a contract of insurance, which is a risk-distributing device, it must possess both features, and unless it does it is not a contract of insurance whatever be its name or its form."

200. Underwriting and ratemaking are related, but should be distinguished. For the purposes of this Article, underwriting is specific, while ratemaking is general: "Underwriting by insurance companies is a procedure to determine whether or not a company will accept a risk. Rate making involves determining a premium which is to be paid by a risk that has been accepted." GA. LEG. REP., supra note 27, at 8. Rates are established for product classifications are expressed in terms of the level of sales by a firm. FINAL REPORT, supra note 14, at VI-17. Thus, a given company's premium, in the most general terms and before any adjustments, will be established by the rate for a given product classification applied to that company's level of sales.

201. Although the Task Force did not find a single case in which a manufacturer was unable to respond to an adverse product liability judgment, it recognized that the possibility exists. FINAL REPORT, supra note 14, at VI-34, VII-190. A recent survey by a small business concern indicates that 3 percent of its members have "gone bare"—i.e., without product liability insurance. Id. at VI-34. This indicates that some businesses may be unable to respond to a series of adverse product judgments. Id. at VI-35. At any rate, such a situation might affect a consumer's decision about who to sue in the chain of distribution—manufacturer, wholesaler, or retailer—since all of these parties are often amenable to suit. Cf. id. at VII-190.

202. See supra note 26 and accompanying text.


204. Id. at 1-6, 4-52.
and to gather more complete information about ratemaking for product liability insurance.205

Some have suggested that, with improved information about product liability insurance, better ratemaking procedures, and reforms such as the Risk Retention Act,206 tort reform can be dispensed with as a necessary component in the resolution of product liability problems.207 This position is untenable. First, the Task Force did not rank the three principal causes of the product liability problem in order of importance. Rather, it noted a tendency for the various interests represented to blame each other as the “true” principal cause.208 Insurers and manufacturers pointed to uncertainty in the tort litigation system, while the plaintiff’s bar pointed to inadequacies in insurance ratemaking practices.209 Thus, it is not surprising that some might urge a single solution. Second, the Task Force itself concluded that all principal causes of the product liability problem must be addressed to find an adequate solution.210

While these generic responses adequately answer the argument that improved ratemaking procedures alone will solve the product liability problem, there are more specific reasons why ratemaking changes alone will not suffice. First, a problem of perception exists.211 Insurers perceive the uncertainty in the tort litigation system to be the primary problem in the product liability area,212 and, considering the shifting sands of product liability de-

205. See, e.g., id. at 4-53 & 54. It has been suggested that these reforms will aid ratemaking. Id. See also id. at 1-3.
207. For example, it has been argued that: “It may well be that all that is needed are changes in how risks are insured rather than changes in the risks themselves. At the very least, measures like the Risk Retention Act should be given a chance to work before tampering with the delicate mechanism of tort law.” Ribstein, The Model Uniform Product Liability Act: Pinning Down Products Law, 46 J. Am. L. & Com. 349, 355 (1981).
209. Id. at xxxix & I-21. See also Schwartz, supra note 10, at 578.
211. The vice president of one insurer, John F. O'Sullivan, has noted the problem of perception. Observing that there is little meaningful data available about product liability claims and exposures, he remarked that: “Under the circumstances it is possible that those involved in determining rates for products liability insurance are strongly influenced by isolated unreasonable decisions.” Nat'l Underwriter, Jan. 6, 1978, at 19. O'Sullivan further observed that: “[I]t's possible that existing products liability law is not as significant a contributing factor to the unavailability or unaffordability of products liability insurance as in perception of the trend in the law.” Id. (emphasis added).
212. See, e.g., Insurance Study, supra note 14, at 4-88:

A central theme emerging from our interviews with insurance executives in analysis of underwriting files is that to the extent there is a crisis in products liability insurance, it has been caused less by
velopment, such a perception may be valid. Professor Schwartz has noted: "[E]ven if insurers substantially improve their ratemaking practices, underwriters would be in a very poor position to predict the consequences of an individual product risk. The uncertainty inherent in the tort litigation system could justify very conservative rate setting."

Second, some of the other options, such as risk retention, work best in a stable legal environment.

Finally, just as some have argued that insurance reform alone is the answer, others have suggested that tort reform can eliminate the need for reform in insurance practices. In all likelihood, all causes should be addressed.

1. The Nature of Product Liability Insurance Ratemaking and Underwriting

In order to comprehend the specific effects of uncertainty in the

known increases in claims costs than by high and increasing uncertainty about future suits and settlements. Increasing costs and resulting losses are occasionally cited as reasons for rate increases or coverage denials, but poor underwriting results have plagued other lines of insurance during the past 2 years without creating the "crisis" atmosphere surrounding product liability.

213. Schwartz, supra note 10, at 584. Schwartz is quoted to similar effect in Nat'l Underwriter, Nov. 2, 1979, at 8: "As long as courts can retroactively create new and unprecedented product liability law, the specter of future products liability crises will continue." Other sources have reached the same conclusion:

Assuming there were improvements in insurance rate-making practices and in product liability loss prevention, uncertainties in the substantive rules governing the tort-litigation system could serve as justification for continuous adjustments in product liability rates.

Thus, insurers stress that in light of the current legal climate, past data are not a reliable source for rate making.


214. Risk retention is self insurance. It is especially effective when "the loss costs involved are relatively predictable from period to period and when the retaining organization has the necessary financial and administrative resources to cover the losses effectively and efficiently." INSURANCE STUDY, supra note 14, at 3-20. Risk retention has thus far been used primarily to cover property risks. Id.

215. One can also argue that state insurance regulation can control product liability insurance rates. There are at least two problems with this position. First, in 30 percent of the states rates are not subject to prior approval by the state insurance commission. INSURANCE STUDY, supra note 14, at 2-16. Second, because of the inherently judgmental nature of determining present liability insurance rates, see infra notes 218-23 and accompanying text, state regulators have generally gone along with product liability rate changes implemented by insurers. INSURANCE STUDY, supra note 14, at 1-2, 1-3, 1-37. See also Final Report, supra note 14, at V-12.

216. 4 LEGAL STUDY, supra note 14, at 18. Cf. INSURANCE STUDY, supra note 14, at 4-18.
tort litigation system on the insurance industry, it is important to first develop a basic understanding of the nature of product liability insurance ratemaking and underwriting procedures. The first major point is that product liability rates and premiums are based on highly judgmental considerations. The ratemaking arm of the insurance industry often speaks of two types of rates for differing product classifications. The first is the so-called "manual" rate, which is usually applied to low risk products produced by small firms. This type of rate is actuarially determined, that is, it is a rate for product classes for which there are sufficient data and experience to determine statistically the risk upon which to base the premium. The second type of rate is for so-called "(a) rated" products classifications. The (a) rated classifications involve products for which there is insufficient data and experience to determine the risk. As a result, the ratemaking arm of the insurance industry has developed suggested rates for (a) rated products, but these rates are only guidelines, and are completely subject to the judgment of the underwriter.

While most product classifications are manually rated, eighty-five to ninety percent of the exposures to product liability risks are for products that are not so rated. Thus, the vast majority of product liability risks involve products for which the underwriters' judgment determines the premium. Even if a product is manually rated, it is not immune from the judgment of an underwriter. In deciding whether to accept a particular risk, the underwriter will often subject even a manually rated product premium to some judgmental factors. Thus, the final product liability premium any manufacturer, wholesaler, or retailer pays is heavily influenced by judgmental considerations.

217. In the product liability field at least, the ratemaking arm of the insurance industry is the Insurance Services Office (ISO). Final Report, supra note 14, at V-9.
218. See Final Report, supra note 14, at V-10.
221. Sixty-seven percent of ISO product classifications are manually rated. Insurance Study, supra note 14, at 1-36; Final Report, supra note 14, at V-10 (indicating 65-75 percent of product classifications are manually rated).
222. Eighty-five to ninety percent of premium dollars are spent on product classifications that are not manually rated. Final Report, supra note 14, at V-10. See also Ga. Legis. Rep., supra note 27, at 10-11. Premium dollars should reflect exposure to risk, but, of course, the accuracy of such a reflections in the products liability area is open to question. This Article assumes a rough correlation.
223. See, e.g., Insurance Study, supra note 14, at 1-38: "Even for manually rated classifications, where the basic rate is based on aggregate experience, some judgment may be involved in selecting the appropriate classification."
The second major point is that product liability rates are based on national, not statewide, experience. The most likely reason for this is that most products are marketed on a national basis and suits may arise in any jurisdiction. Moreover, as has been indicated, it is unlikely that state insurance regulation can control product liability insurance rates.

These two factors—that product liability rates and premiums are heavily dependent upon an underwriter's judgment, and that product liability rates are based on national experience—combine to link rates and premiums to uncertainty in the tort litigation system.

Because product liability rates and premiums are so heavily influenced by judgmental considerations, extreme cases have a disproportionate influence on ratemaking and underwriting decisions. Since products are marketed on a national basis and rates are set on the basis of national experience, the influence of the so-called "worst case" is limited not to the most extreme case within one jurisdiction, but to the most extreme case in any jurisdiction. Thus, the conservative judicial decisions of one jurisdiction will have little effect on the product liability rates and premiums charged within that jurisdiction. Rather, these charges will be influenced by changing judicial interpretations in the "most liberal" jurisdiction.

All of this would be meaningless if there were no real impact on

224. GA. LEGIS. REP., supra note 27, at 13; Schwartz, supra note 1, at 9.
225. See, e.g., the remarks of Mr. Grover Czech of the American Insurance Association, quoted in Nat'l Underwriter, Aug. 17, 1979, at 6.
226. See supra note 215.
227. The LEGAL STUDY observed: "[I]nsurers tend to establish premium rates on the basis of the broadest possible theory of liability which has been adopted in any jurisdiction." 4 LEGAL STUDY, supra note 14, at 70. The Georgia Legislative Report commented: "As isolated and wrongly decided cases are presented, fear of these decisions can likely cause underwriters to reevaluate premiums as well as loss reserve estimates." GA. LEGIS. REP., supra note 27, at 11.
228. Observing that product liability rates and premiums are based on the experience of other jurisdictions, the Georgia Legislative Report noted two effects: First, the conservatism of the Georgia courts is of little or no benefit to those manufacturers that are domiciled in Georgia or whose products are distributed primarily in Georgia. Second, the impact of any legislative changes in Georgia will be minimal or nonexistent unless those states which are significantly contributing to the product liability problem also enact legislation.

GA. LEGIS. REP., supra note 27, at 13. Similar concerns were expressed by Grover Czech of the American Insurance Association: "Because of [products liability rates reflecting national experience], if [the Pennsylvania tort reform level] were to be enacted tomorrow in the state of Pennsylvania, there would be no specific and immediate impact on product liability cases." Nat'l Underwriter, August 17, 1979 at 6.
the final insurance product. That, however, is not the case. The impact of uncertainty in the tort litigation system on product liability insurance has been felt in three major areas: unavailability of insurance, partial unavailability of insurance, and the increased cost of insurance.

2. Unavailability of Product Liability Insurance

When news of the product liability crisis first received national attention during the period from 1974 to 1976, many manufacturers asserted that they were being forced to “go bare”; that is, forced to go without product liability insurance. The available evidence indicates that this concern was overstated. Any availability problem has been largely confined to smaller firms or to firms in particular product areas.

One of the reasons for this tendency to “overstate the case” might relate to the inherent difficulties in measuring the extent of any availability problem. A fundamental difficulty is defining the term “unavailable.” Insurance may be deemed by some to be “unavailable” for reasons other than the defects in tort litigation system. First, it is difficult to measure how diligent a given firm may have been in seeking an insurance quotation. Second, some firms may be unable to secure a quotation because they produce unsafe products and have a poor claims record. Insurance that is unavailable for such reasons might be termed “legitimately” unavailable. Third, some manufacturers might assert that there is an availability problem when their insurance costs have significantly increased. Insurance in such instances is still available, however, if the manufacturers are willing to pay the price. On the other hand, at some point the affordability problem necessarily becomes an availability problem if the manufacturer really cannot afford to carry any insurance. Indeed, some firms may understate the problem for fear that reporting they are “going bare” may jeopardize their relationships with customers.

Generally, the availability problem is not serious. The Task Force’s insurance contractor could identify only sixty-two compa-

229. The Task Force developed this definition: “Product liability insurance is unavailable to a firm when, after a thorough search of the insurance market, that firm is unable to obtain a quotation for products coverage which effects a reasonable transfer to risks from the insured to the insurer.” FINAL REPORT, supra note 14, at VI-2. Of course, what a reasonable transfer of risk is remains problematical.
230. See id. at VI-3.
231. Id.
232. Id.
233. Id.
234. INSURANCE STUDY, supra note 14, at 3-4.
nies that previously had coverage but were now "going bare."²²³

This figure included firms going without insurance because they felt they were unable to afford it.²²⁶ The Task Force's Industry Study found that eighty-six percent of the firms in its telephone survey carried insurance, but of those firms that did not carry insurance, only four were not able to obtain insurance at any price.²²⁷ Similarly, an industry survey of small manufacturers found that only 2.1 percent of firms going without coverage were unable to find any willing carrier.²²⁸ Other industry surveys have also failed to reveal a widespread availability problem.²²⁹ Finally, state insurance commissioners also indicated to the Task Force that they did not feel that there is a widespread availability problem.²³⁰

Where there is an availability problem, it tends to exist only for smaller firms.²³¹ There are three reasons for this: (1) larger companies pay greater premiums to insurers, and have greater leverage over them; (2) the larger companies have the financial and administrative capability to solve insurance problems internally through such devices as risk retention; and (3) larger companies often have a greater product mix.²³²

Also suffering from availability problems are the manufacturers of durable products, such as industrial machinery. The problem here is that these companies manufacture products with a life expectancy of ten to twenty years. After a company has been in business for twenty years its exposure to potential liability may amount to a thousand times the value of the current year's production.²³³ In such a situation, older firms may be unable to pass along the insurance cost to consumers, since it must compete in a market with newer firms that do not yet have a "long tail" problem and do not have to reflect the older firms' higher insurance costs in

²²³. Id.
²²⁶. Id. at ES-5, 3-2. See also Final Report, supra note 14, at VI-4.
²³³. See Final Report, supra note 14, at V-6, V-7.
²³⁰. See Insurance Study, supra note 14, at 3-2, 3-23.
²³². Id. at 3-24. Greater product mix, for example, allows firms to spread the effect of rate increases to safer product lines, and to offer an attractive overall package to the insurer. See id. at 3-23, 3-24. See also id. at ES-3.
²³³. Id. at ES-5. This does not necessarily imply that older products present a significant overall product liability problem.
the price of their product.\textsuperscript{244}

3. \textit{Partial Unavailability of Products Liability Insurance}

Unavailability problems are not limited to instances where a company is unable to obtain \textit{any} insurance. They also include situations where a firm cannot obtain \textit{adequate} product liability insurance. This latter situation might be termed one of \textit{partial} unavailability, and would include restrictions on policy limits, increased deductibles, or restricted coverage on certain products.\textsuperscript{245}

While the evidence in this area is conflicting, it does suggest that there is a partial unavailability problem.

On the one hand, the Task Force's Insurance Study down-

\textsuperscript{244} See \textit{infra} notes 350-51 and accompanying text. The overall availability problem is probably best summarized by the conclusions of the \textit{Final Report}:

There is no widespread problem of product liability insurance being unavailable. A few companies in our target industries and other high-risk product lines are having difficulty obtaining product liability insurance. For some others, product liability rates would appear to be unaffordable — it has been persuasively argued to the Task Force that this is the practical equivalent of unavailability.

\textit{Final Report, supra} note 14, at VI-52. The eight target industries studied by the Task Force were: industrial machinery; industrial grinding wheels; ferrous and non-ferrous metal castings; industrial chemicals; aircraft components; automotive components related to safe vehicle operation; medical devices and pharmaceuticals; and power lawnmowers. \textit{Id.} at I-6, I-7.

While there is no reason to doubt the Task Force findings, reports to the contrary do circulate. For example, Robert Taft, Jr., counsel for the Special Committee for Workplace Product Liability Reform, a group of trade associations, testified that:

The number of companies that are going bare without product liability [coverage] is a frightening example of the "American roulette" that has resulted from the product liability insurance crisis. Due to this lack of affordability and/or availability and large deductibles, 1978 surveys revealed that 35 percent of the American Textile Machinery Association Members and one-fifth of the members of the National Machine Tool Builders Association have gone without product liability insurance at all, each risking bankruptcy should a large judgment be entered against it and providing little incentive for keeping or expanding capital investment in the business.

R. Taft, Jr., \textit{Testimony on behalf of Special Committee for Product Liability Reform, before Senate Comm. on Commerce, Science and Transportation} 3 (Apr. 22, 1980). While the testimony is significant, its impact is unclear. First, the quoted material could indicate more of an affordability problem than an availability problem. Second, the testimony relates only to certain types of manufacturers; thus it is questionable whether it is indicative of an overall availability problem. Third, the statistics regarding the NIMBA involve partial unavailability problems, and so do not clearly indicate the impact of the partial availability problems.

On the other hand, when substantial percentage of any group of manufacturers go without insurance, one must conclude that availability problems for certain manufacturers in certain industries are quite severe.

\textsuperscript{245} See \textit{Final Report, supra} note 14, at VI-7.
played partial unavailability problems. After reviewing 3,000 underwriting files, the Insurance Study found that deductibles were used in only three percent of the cases. The Insurance Study concluded that "although insurers are imposing some limitations on coverage, such as higher deductibles and reduced coverage limits, these practices are not common." The Study listed two reasons why coverage restrictions are used infrequently: first, by restricting coverage, an insurer subjects an insured to a serious financial risk, which tends to foster a poor relationship between the two parties; second, a policy holder can usually find another insurer willing to provide the coverage for some premium. Thus, the Insurance Study concluded that coverage restrictions are rarely used because they are simply bad business. The Study did, however, indicate that there is a "somewhat greater tendency" for underwriters to not raise liability limits on existing policies, and that underwriters are becoming "more selective" in the product liability field. On this basis, the Final Report concluded that—because some manufacturers' risk exposure to product liability claims is increasing, due to trends in the law, increased sales, new product development, or merely inflation—they may be unable to raise the limits of their product liability insurance coverage to deal with these risks.

Unlike the Insurance Study, the Task Force Industry Study found that a significant percentage of respondents to its telephone survey reported coverage restrictions. Restrictions imposed by companies included limiting coverage to products currently produced, excluding certain products from coverage, or limiting the amount to be expended on defense costs. Ten percent of the respondents reported that some of their products were excluded from coverage, and nine and one-half percent reported other restrictions, such as excluding new products or including defense costs within policy limits. Similarly, testimony of insurance companies before congressional committees indicates that some companies do automatically exclude certain product categories

246. See INSURANCE STUDY, supra note 14, at 3-12.
247. Id. at 3-2.
248. Id. at 3-12.
249. Id.
250. Id.
251. There are occurrence limits (limits to be paid on any one claim) and annual aggregate limits (total limits on all occurrences during any one policy year).
252. Final REPORT, supra note 14, at VI-8.
253. 1 INDUSTRY STUDY, supra note 14, at IV-41 & Table IV-18. See also FINAL REPORT, supra note 14, at VI-9.
254. 1 INDUSTRY STUDY, supra note 14, at IV-41.
255. Id.
Probably the most significant disparity between the Task Force contractors regarding partial unavailability is reflected in their findings regarding deductibles. The Insurance Study found that only three percent of the underwriting files that it reviewed contained deductibles.\textsuperscript{257} The Industry Study, however, discovered that forty-one percent of the firms it surveyed had some form of deductible, a figure that represented a sharp increase in frequency since 1975.\textsuperscript{258}

The Industry Study also found that the size of the average deductible increased significantly between 1975 and 1976 for both large and medium-sized firms, but had decreased slightly for smaller firms.\textsuperscript{259} Similarly, a survey by the National Machine Tool Builders Association (NMTBA) found that twenty-three percent of the sixty firms it surveyed had deductibles, and that forty percent of the fifteen metal-forming companies surveyed had deductibles.\textsuperscript{260} In addition, the NMTBA survey showed a significant increase in the size of deductibles from 1975 to 1976.\textsuperscript{261} These results might be explained partially by greater use of voluntary risk retention, especially by larger firms.\textsuperscript{262} However, even if risk retention, through the more frequent use of larger deductibles, is voluntary, it represents a significant effect of uncertainty in the tort litigation system, as it indicates a business decision to bear a risk that previously would have been transferred through the insurance mechanism.

In conclusion, uncertainty in the tort litigation system has led to a partial unavailability problem for some firms. Insurers have become reluctant to raise coverage limits for existing policyholders, thus ultimately exposing those policyholders to increased risks. Some firms must cope with restrictions imposed by their insurers that exclude certain existing or new products, from coverage. The most clearly documented partial unavailability problem manifests itself through the more frequent use of deductibles and the use of larger deductibles. While the use of deductibles in some cases may be voluntary, it indicates that manufacturers and busi-

\textsuperscript{256} Id.\textsuperscript{257} \textit{Final Report}, supra note 14, at I-21.\textsuperscript{258} Id. at VI-11.\textsuperscript{259} The average deductible increased 61 percent to $335,000 between 1975 and 1976 for large firms, 258 percent to $120,000 for medium-sized firms, and decreased 17 percent to $7,400 for small firms. \textit{Id.} at VI-11; \textit{Industry Study}, supra note 14, at IV-37 & Table IV-15.\textsuperscript{260} See \textit{Final Report}, supra note 14, at VI-10.\textsuperscript{261} Id.\textsuperscript{262} See id. at VI-53. See also \textit{Insurance Study}, supra note 14, at 3-21, 3-22.
nessmen must now bear risks for which they previously would have been able to obtain coverage.

4. The Affordability of Product Liability Insurance

The Task Force Briefing Report found that the product liability insurance problem was primarily one of cost rather than availability. One of the principal difficulties in discussing the affordability of product liability insurance, however, comes in trying to put the figures into perspective. Manufacturers and insurers pushing for tort reform often point to increases in premiums ranging from five-hundred percent to several thousand percent. Plaintiffs' attorneys, and other opponents of tort reform, counter by noting that product liability premiums seldom amount to more than one percent of total sales. However, looking at such figures in isolation and without elaboration is misleading, and fails to give consideration to the underlying facts. Pointing to a percentage increase in the price of premiums only indicates that premiums *cost more*, not that they are unaffordable or unjustified. Conversely, viewing a premium only as a percentage of sales ignores the fact that most profitable businesses make a profit amounting to only a small percentage of sales, and thus underemphasizes the impact of large increases in product liability premiums. The Final Report of the Task Force offers this cogent explanation:

> An increase in a firm's product liability insurance premium of several hundred percent in one year *may not be unaffordable* if the previous year's premium was less than a tenth of a percent of sales. On the other hand, an increase in the ratio of current premium to sales (expressed as a percentage from 0.1% to 0.35% *may be unaffordable* to a firm which cannot pass on increased costs and which has a net profit margin of 1.0% of sales. The increase in premium to 0.35% of sales could be unaffordable if that firm cannot withstand a reduction of pre-tax profits by one fourth.

With these limitations, the data does point to a significant cost problem in the product liability insurance area.

The Insurance Study found that product liability insurance rates had increased significantly, especially from 1974 to 1976. For example, in its review of underwriting files, the Insurance Study found that rate increases in the target product categories ranged from 19 percent to 568 percent since 1974. For other rated products the average increase was 251 percent. Furthermore, data collected by the Task Force indicate a significant increase in product

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265. Id. at VI-12, VI-13 (emphasis in original, footnote omitted).
266. Insurance Study, supra note 14, at 2-20. The caveats to these figures, id., should, however, be examined. See also Final Report, supra note 14, at VI-14.
liability premiums. The Industry Study found an average increase of 280 percent in premiums paid per thousand dollars for the 1971 through 1976 period. The average premium increased 384 percent for small firms, and certain product classifications, such as medical devices and pharmaceuticals, reported especially large increases, 388 percent and 613 percent, respectively. Other evidence received by the Task Force reveals more extreme cases not reflected by the averages. For example, one industrial machinery manufacturing company reported a premium increase of over 1,800 percent in one year. Letters provided to the Task Force by a legislative committee also indicated that premium increases ranged up to 7,200 percent.

To reiterate, the cost problem has been particularly acute in smaller firms. This problem is reflected not only in proportionally greater increases in premiums, but also in the fact that smaller firms are less able to cope effectively with cost increases. There are several reasons for this. Small companies may be unable to retain risks through large deductibles, and may have a narrower product mix, which makes it difficult to spread the premium between low-risk and high-risk products. Moreover, insurance companies are less likely to credit smaller firms with a good safety record with reduced premiums. By contrast, the insurance companies may be more willing to "hold the line" for large firms because of the larger premiums they produce, or because providing coverage for other portions of a larger firm's insurance needs makes for a generally attractive insurance package, despite potential product liability problems.

In summary, despite the inherent difficulties in evaluating data regarding product liability insurance costs, there has been a substantial increase in the cost of product liability insurance, especially for smaller firms and manufacturers of high-risk products. Although product liability insurance premiums have meliorated somewhat in the early 1980's, the cost of insurance will continue

268. Id. at VI-19.
269. Id. at VI-22.
270. Id. at VI-22, VI-23.
271. See id. at VI-24.
272. See id. at VI-25, VI-26.
273. See id. at VI-26, VI-27.
274. See Bus. Ins., Jan. 10, 1983, at 22. A principal reason for this melioration is that insurers have been enjoying "higher than normal" returns on investment income as the economy surges and can thus engage in premium competition. Bus. Ins., Aug. 16, 1982, at 13. Such competition is unlikely to last long, however, if product liability underwriting losses continue. By the end of 1982, insurers were paying out $1.27 in product liability losses for every dollar of premiums received. Bus. Ins., Apr. 18, 1983, at 27.
to rise in our unstable legal environment where a premium is based upon the worst possible case from any jurisdiction. Product liability insurance costs or unavailability have, as of yet, bankrupted few firms, but the real issue is whether such costs on business and consumers is justified when a more certain system of federal law is possible.

B. Uncertainty and Its Effect on Manufacturers

Manufacturers have felt the expansion of and constant flux in product liability law in a number of ways. In addition to the insurance availability and affordability problems, the most pervasive inequity from the manufacturer's perspective is that any one product is subject to legal standards which vary widely from jurisdiction to jurisdiction. This uncertainty regarding legal standards has had four major impacts on the manufacturer: (1) the psychological costs of uncertainty; (2) the impact of uncertainty on doing business; (3) the effect of uncertainty on business failures; and (4) the effect of uncertainty on loss prevention programs.

1. The Psychological Costs of Uncertainty

The psychological effects of uncertainty caused by the tort litigation system on manufacturers and insurers are very real. For example, manufacturers often perceive product liability problems to be worse than they really are because a grapevine carrying liability horror stories has developed, spreading vast amounts of misinformation. Manufacturers, like insurers, react to the most extreme cases decided in any single jurisdiction. Although the

275. The Insurance Study noted that:

Since judgment is a major factor in determining rates, and since an underwriter must exercise this judgment in a highly uncertain tort litigation element . . . rates will probably continue to increase, though at a more modest pace, unless there is discernable evidence that the trend toward absolute liability and overly generous product liability awards is halted.

INSURANCE STUDY, supra note 14, at ES-4.


276. Of course, availability and affordability problems can also affect wholesalers and retailers, who can also be held liable in product liability suits.

277. The practical impact of such fears was demonstrated in the recent swine flu experience. See infra notes 295-96 and accompanying text.

278. According to Professor Birnbaum: "Manufacturers are fearful because they don't know what to do. They don't know what standards to follow when they make their goods." U.S. NEWS & WORLD REP., June 14, 1982, at 62.


280. See supra notes 224-29 and accompanying text.
psychological effects of uncertainty and misinformation are, of course, reflected in business decisions, these effects carry their own inherent costs and burdens that should not be overlooked.

It is impossible to quantify the psychological costs of uncertainty. The qualitative effects of the psychological burden, however, include frustration, anxiety, and lack of respect for the legal system. Such psychological burdens have been noted in related instances. Writing on the costs of “red tape,” duplicative, confusing, and frequently unnecessary government paperwork, a federal commission concluded:

Psychological burdens may be more important than dollar costs to individuals who experience:
- Frustration when completing complex forms;
- Anger when faced with multiple requests for similar data;
- Confusion in reading unclear instructions;
- Anxiety that errors may result in denial of benefits or legal consequences; and
- Fear that confidential information may be abused.281

Similar costs are incurred by those who must deal with the tort litigation system on a day-by-day basis. Instead of complex forms, manufacturers must deal with complex and increasingly confusing standards of responsibility in designing and marketing their products. Instead of multiple requests for similar information, the manufacturer is exposed to multiple causes of action in single jurisdictions and a multiplicity of theories across the fifty states. In place of unclear instructions, a manufacturer is (at least in design cases) often held to vague “reasonableness” standards with different courts assigning different weights to different factors. There is also the fear that a plaintiff, through discovery, can obtain, misinterpret, and misuse company documents. The analogy between uncertainty in the tort litigation system and the confusion of duplicative red tape is not an unduly strained one, and the psychological costs are arguably similar.

The psychological costs of uncertainty also affect business decision-making. One specific consequence is that uncertainty tends to produce overly cautious business decisions. Studies done on choice-reaction time,282 that is, the time it takes to make a decision or respond to a given amount of information, indicate that reaction time gets longer linearly283 as the amount of information increases.284 Applied to a manufacturer confronted with decisions to

281. COMMISSION ON FEDERAL PAPERWORK, Final Summary Report, at 6.
283. If something functions linearly, the output is directly proportional to the input.
284. See, e.g., Hick, On the Rate of Gain of Information, 4 Q. J. EXPERIMENTAL PSYCHOLOGY 11 (1952); Hyman, Stimulus Information as a Determinant of Reac-
be made on product development, for example, such studies sug-
gest that a manufacturer may take more time to make those deci-
sions as the number of contradictory product liability laws
increase. This in turn increases the information that must be con-
sidered in making a decision. The perception of uncertainty about
the law may also result in overly cautious business decisions. In
another important study on choice-reaction time, it was deter-
mined that the time it takes to react to situations depends more on
how many possible stimuli people infer to be present than it does
on how many there actually are. The effects of uncertainty on
the manufacturer, therefore, depend not only upon how much in-
formation (how many laws or court decisions) there actually are to
be considered, but also upon how much information manufactur-
ers think there is to consider. Such a reaction would hardly
seem to promote risk-taking or innovative behavior. The truth of
this statement is best illustrated by looking at the actual impact of
uncertainty on business activities.

2. The Impact of Uncertainty on Doing Business: Limitations
   on Product Development and Marketing and
   Increased Transaction Costs.

The effects of product liability uncertainty are manifested
throughout the manufacturing process. From the initial decision
of whether or not to develop a product to the decision whether or
not to recall or remove a product from the market, uncertainty can
take its toll. At the same time, uncertainty is reflected in high
transaction costs.

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285. See Fitts & Switzer, Cognitive Aspects of Information Processing, 63 J. EXPER-
286. See J. LACHMAN, R. LACHMAN & E. BUTTERFIELD, supra note 282, at 144, for a
discussion of the results and implications of the experiment.
287. Id. This summary of the manufacturer's possible reaction is a paraphrase of
   the description of the results of Fitts and Switzer's experiment. See supra
   note 285.
288. These consequences are dictated by practical business considerations. The
costs associated with beginning a product line tend to be high, therefore pro-
viding a reason to put off development. Then too, once the start-up and
advertising costs have been paid, they provide "positive incentives for a
manufacturer to continue production of a given line." McIntuff, Products Lia-
bility: The Impact on California Manufacturers, 19 AM. BUS. L.J., 343, 357
(1981). Therefore the impact of products liability law on manufacturers can
be gauged by examining whether product lines had to be dropped due to a
concern over the law. Id.
289. See generally PRODUCT LIABILITY ALLIANCE, Economic Consequences of a
In product development, the dampening effect of current product liability laws has been noted. One study, for example, found that eight percent of the firms surveyed delayed or cancelled the introduction of new products over a two year period because of product liability considerations.\footnote{\textit{Federal Product Liability Act} 10-12 (July 2, 1982) (unpublished report) [hereinafter cited as Report, Economic Consequences].} Similarly, the National Federation of Independent Business reported that 12.8 percent of the almost 1,300 firms responding to its survey had stopped development of a new product for similar reasons.\footnote{\textit{Final Report, supra note 14, at VI-29.}} Decisions to curtail product development are especially prevalent in small firms producing high-risk products.\footnote{\textit{Id. at VI-31.}} The importance of this is underscored by the fact that small, high technology firms have traditionally been at the forefront of product innovation. Abridged product development has also been exhibited by companies producing pharmaceuticals and medical devices.\footnote{\textit{Id. at VI-30.}} As a result, "there may be an adverse impact upon medical research and upon the development and marketing of products which may be socially beneficial."\footnote{\textit{Cf. id. at VI-31.}}

A specific example of a socially beneficial product development that was adversely affected by uncertainty was the swine flu vaccine. Although Congress appropriated $135 million for the mass immunization program, the pharmaceutical companies initially refused to produce the vaccine due to an inability to obtain adequate product liability insurance. The companies and their insurers were especially worried about potential defense costs and lengthy litigation, although, under the laws of most states, they would neither be subject to a duty to warn for unforeseeable risks, nor subject to liability for unavoidable risks if a proper warning was given.\footnote{\textit{Id. at VI-31.}} If Congress had not intervened and limited the liability of the vaccine manufacturers by statute, the vaccine probably would never have been produced.\footnote{\textit{Id. at VI-30.}} The swine flu epidemic never materialized and unfortunate side effects were experienced by some of those who were administered the vaccine. Nevertheless, the example is an important one: a future epidemic may indeed materialize and pharmaceutical manufacturers may again refuse to produce a necessary vaccine. The important point is that medical authorities had determined that the product was both beneficial...
and necessary to protect public health. In spite of this, because
the vaccine was potentially risky in a minute number of cases, it
was almost kept off the market because of the existing rules of
product liability.

With continuously changing case law creating constantly new
or expanded liability rules, the curtailment of product develop-
ment is likely to continue. The Beshada\textsuperscript{297} decision was a prime
example. If other jurisdictions follow New Jersey and impose lia-

dility for the failure to warn of dangers that were undiscoverable at
the time of manufacture,\textsuperscript{298} companies might be justifiably wary of
producing any product that could in future years subject them to
liability if their safety research efforts at the time of manufacture
were later proven to be inadequate.\textsuperscript{299} However, even if other ju-
risdictions fail to follow New Jersey's lead, the law of that state will
be significant since national product development decisions are
often made on a "worst case" basis.\textsuperscript{300}

It is, admittedly, difficult to ascertain with precision the net ef-
ceffect upon society of inhibited product development arising from
uncertainty in product liability law. Current law may deprive soci-
ey of some useful products; it may also keep other dangerous
products off the market or delay their introduction until safety im-
provements can be made.\textsuperscript{301} There are undoubtedly benefits as
well as costs to the present product liability system. At the same
time, however, a uniform federal law would reduce the costs ex-
acted by uncertainty, while continuing to keep unduly dangerous
products out of the marketplace.

The related problem of product marketing is just as serious as
that of product development. The Task Force Industry Study dis-
covered that seven percent of the firms in its survey discontinued
products during 1975 and 1976,\textsuperscript{302} and that four percent reported
that they were considering discontinuing
products.\textsuperscript{303} Similar re-
sults were noted by other surveys. A study conducted by the Na-
tional Federation of Independent Business found that 4.6 percent
of the same survey groups noted earlier had discontinued or


539, 549 (1982).

\textsuperscript{299}. \textit{Beshada} represents at present a minority view. Nevertheless if manufactur-
ers do respond to the "worst case" idea, this case could have significant
impact.

\textsuperscript{300}. \textit{See supra} notes 227-28 and accompanying text.

\textsuperscript{301}. \textit{Final Report}, \textit{supra} note 14, at VI-30.

\textsuperscript{302}. 1 \textit{Industry Study}, \textit{supra} note 14, at IV-12, IV-13. \textit{See also Final Report},
\textit{supra} note 14, at VI-23.

\textsuperscript{303}. 1 \textit{Industry Study}, \textit{supra} note 14, at IV-63, Table IV-33. \textit{See also Final Re-
port, supra} note 14, at VI-29.
planned to discontinue certain products due to product liability considerations.\textsuperscript{304} Seventeen percent of the businesses that responded to a survey conducted by five members of the House of Representatives reported that they had abandoned at least one product because of product liability considerations.\textsuperscript{305} Finally, a survey of California manufacturers on the impact of product liability law noted that twenty-three percent of the small manufacturers reported that they had dropped certain product lines due to product liability law, while twenty-two percent of the large manufacturers stated the same.\textsuperscript{306}

Specific examples of products whose marketing has been affected by product liability law range from relatively insignificant devices to products that concern the entire public. One company took an instrument that was designed to warn crane operators that their booms were approaching unsafe conditions off the market because of the company's concern over potential liability should the device fail.\textsuperscript{307} Such a product may not be considered significant in terms of the entire society, but it was, within one industry, a fairly innovative product that enhanced workplace safety.

A more significant example of a product that had been developed, but which was withdrawn from the market largely because of liability concerns, was the airbag—a product that has been promoted as a solution to the problem of carnage on the highways. Despite initial indications that airbags would be required on new cars, the government mandate was never clearly stated. Ultimately, the government required only the installation of passive restraints, including passive seatbelts.\textsuperscript{308} Airbag manufacturers thus feared that automakers would, given the choice, opt to install the less expensive belt system.\textsuperscript{309}

More importantly, however, even absent the regulatory confusion, product liability concerns could not be eliminated. An inability to pin down insurance costs made it impossible for companies to estimate the cost of the airbag.\textsuperscript{310} Eventually, the two largest airbag manufacturers, Eaton Corporation and Allied Chemical, got out of the airbag business.\textsuperscript{311} Eaton had spent over thirteen years

\begin{thebibliography}{99}
\bibitem{305} See Final Report, \textit{supra} note 14, at VI-30.
\bibitem{306} McIntuff, \textit{supra} note 288, at 357.
\bibitem{307} Statement of Richard Harris before the Senate Subcommittee on Labor, Committee on Human Resources, Sept. 22, 1978 (mimeo at 4).
\bibitem{309} Id. at 147.
\bibitem{310} Id. at 148.
\bibitem{311} Id. at 148.
\end{thebibliography}
and twenty million dollars developing the device. Potential liability was at the core of their decision to leave the field:

> The liability question was never solved, and the companies still in the business do not yet know the extent of their exposure or how it will be covered. Eaton's insurance carriers initially estimated liability insurance at about $10 per unit, then upped the figure to as much as $50, and finally declined to give any quotation.

Product liability concerns regarding airbags were not unwarranted. The devices rely on a very complex technology, and must function properly in a collision occurring ten years after the vehicle is manufactured. Moreover, airbags work best in front-end collisions, and when used in conjunction with a seatbelt. But the consumer might expect the airbag to offer protection from every accident. Since the bags are designed to deploy only in dangerous accidents, the chances of some injuries to consumers whose cars are equipped with airbags are great. Thus, despite the fact that, on balance, airbags would significantly improve the safety of automobiles, the products "could become an endless matter for lawsuits."

Uncertainty about the law not only inhibits production and marketing, but also generates high transaction costs. The manufacturer must know the state of the law in order to produce legally "safe" products. In addition, the manufacturer must also know the law in order to defend against possible product liability suits. Since the tort litigation system is an adversarial one, manufacturers must make large expenditures for the legal expertise necessary to defend lawsuits. A significant proportion of the costs arise from the need to determine the current law of the jurisdiction in which case is to be tried, resolve conflict of law problems, and assess the possibility that new law will be created.

Recent data indicate that 109,000 product liability suits were

312. Id.
313. Id. at 148.
314. Id.
315. Id.
316. Id.
317. Id.
318. The Product Liability Alliance has noted that:

> The variations in product liability rules greatly increase the cost of designing, manufacturing, packaging, labeling, shipping and selling products in interstate commerce. Confronted with a crazy quilt of product liability losses . . . manufacturers must devote substantial resources to making sure that their products satisfy the requirements of as many States as possible.

Report, Economic Consequences, supra note 289, at 19.
319. Id.
320. See id. at 11-12 & nn. 20-21.
filed in federal and state courts in 1981. A uniform product liability law could conceivably result in annual reductions of 218 to 436 million dollars in legal research costs generated by out-of-state claims. Those figures are based upon an estimate that, without the need to engage local counsel and research the complex product liability standards of the state in question, a business could save, on the average, two to four thousand dollars on each case. Obviously, a uniform law could reduce the high transaction costs associated with current product liability suits, and the savings to manufacturers could result ultimately in savings to consumers.

3. The Effect of Uncertainty on Business Failures

Business failure represents perhaps the ultimate blow to firms facing an uncertain tort litigation system. At the time of the Task Force Report there were no verifiable product liability related business failures. The Task Force did, however, predict that business failures could be caused by product liability problems. It concluded, admittedly on the basis of circumstantial evidence, that product liability concerns regarding adequate and affordable product liability insurance could be a factor in the failure of small manufacturers of high risk products. The Task Force also noted that manufacturers, particularly small firms, might not have the ability to respond to judgments rendered against them. An excessive judgment or series of judgments handed down against a company with inadequate resources might drive it into bankruptcy.

Subsequent developments in the area of asbestos litigation have met, and exceeded, Task Force expectations. Asbestos litigation is unusual, since the first signs of cancer may not appear until twenty to forty years after exposure. However, as new scientific

322. Report, Economic Consequences, supra note 287, at 11-12. The estimation of the average savings on an out-of-state claim was made in a letter from Frank Orban, senior attorney, Armstrong World Indus., to Sherman Unger, Dept. of Commerce (May 19, 1982), quoted in id. Mr. Orban was the director of the LEGAL STUDY for the Federal Interagency Task Force on Product Liability.
324. See FINAL REPORT, supra note 14, at VI-32.
325. Id. at VI-34, VI-54.
326. Id. at VI-54.
327. The FINAL REPORT noted that 29 percent of the small firms surveyed in the INDUSTRY STUDY did not carry product liability insurance. Although this does not indicate that there is a massive availability problem—many of these firms do not carry insurance because they feel they do not need it—it does indicate that many firms have no resources to fall back on should a large judgment be rendered against them. FINAL REPORT, supra note 14, at VI-34, VI-35.
techniques are developed that correlate chemical exposure to diseases that develop years later, this type of suit could grow. In the meantime, the Manville Corporation has had to seek Chapter 11 bankruptcy protection against the thousands of lawsuits that threatened to absorb all of its assets.\textsuperscript{329} Other companies, although none as large as Manville, have also filed for Chapter 11 protection.\textsuperscript{330} Companies that have been sued, some three hundred in all,\textsuperscript{331} also face the prospect of having their financial statements qualified because they are involved in asbestos litigation, thus making it difficult for them to obtain needed financing. Finally, companies on the stock market must mention the possible impact of asbestos litigation to those purchasing stock, regardless of whether they have qualified financial statements.\textsuperscript{332}

The possibility that burgeoning latent disease litigation, such as the asbestos crisis,\textsuperscript{333} could precipitate the bankruptcy of a company as large as Manville was completely unforeseen by the Task Force Report. The fact that it did occur serves as yet another illustration of growing uncertainty in the tort litigation system.

4. The Effect of Uncertainty on Loss Prevention Programs

Although this Article has focused on the negative implications of uncertainty in the tort litigation system, it would be inaccurate to suggest that the present system has no positive features. One logical response to a system imposing heavy liability on companies for product-related injuries is the introduction of product liability loss control programs. Insurers have a similar motivation for developing loss prevention programs to assist their clients. Many businesses have responded to these incentives by implementing such programs.\textsuperscript{334}

The significance of the increase in loss control programs is as difficult to measure, however, as the impact of these programs in reducing accidents.\textsuperscript{335} Manufacturers have implemented various

\begin{itemize}
\item \textsuperscript{329} Id. at 56, col. 1.
\item \textsuperscript{330} Id.
\item \textsuperscript{331} Id.
\item \textsuperscript{332} Id. at 56, col. 3.
\item \textsuperscript{333} Id. One study estimated that employers and insurers will pay from $38.2 billion to $90 billion in asbestos claims over the next 35 years. Id. at 56, cols. 2-3.
\item \textsuperscript{334} See Final Report, supra note 14, at VI-47.
\item \textsuperscript{335} For instance, companies may differ in their perception of what constitutes a product liability "loss control program," as opposed to what others would consider ordinary manufacturing practices. Id. at VI-49. Moreover, manufacturers may have made less actual commitment to loss prevention programs, when evaluated objectively, as compared to their own perceived commitment. Id. at VI-50. Also, qualitative differences in the programs, such as the impact such a program has on management decisions, are difficult to measure. Id. Thus, while the tort litigation system and higher premiums have had
programs that emphasize better quality control, improved labeling, and product redesign.336 One difficulty with these programs, however, is that they are apparently being implemented to a greater degree in large and medium-sized firms, rather than smaller firms.337 This is important because product liability problems almost invariably impact smaller firms more severely than larger ones, and may indicate that loss prevention programs are not being developed where they are most needed. There are, of course, many reasons why most small firms have not developed loss prevention programs. Small companies may lack the financial resources to implement such programs. Then, too, individual small firms may never have faced a product liability claim, and may feel unconcerned about potential exposure to liability.338

Manufacturers are not alone in developing loss prevention programs. Insurers have implemented loss control programs to aid their insureds as part of their underwriting services.339 The extent and effectiveness of these services is uncertain. For example, sixty-eight percent of the respondents to a telephone survey who carried insurance had been inspected by loss prevention engineers.340 Of the firms inspected, however, only forty-two percent reported that their insurers made specific recommendations to reduce claims. Therefore, only twenty-nine percent of the firms who carried insurance received specific advice about how to reduce their product liability claims.341 Of the smaller firms carrying insurance, only fifty-four percent were inspected by their insurer (compared to sixty-eight percent on the average).342 Thus smaller firms, in addition to being less likely to implement loss prevention programs on their own, are less likely to have received loss prevention control services from their insurer.

One final reason why such programs may not have beneficial effects is that manufacturers often perceive no relationship between their expenditures for loss prevention programs and smaller

a positive effect on loss prevention, "it is not possible to quantify the amount on an industry-wide basis." Id.

336. Id.
337. Id. at VI-49.
338. For example, 39 percent of the small manufacturers in one industry survey that did not carry product liability insurance—58 percent did carry some form of products insurance—did so because they "don't need any." Id. at VI-5. Another 27 percent "never considered it." Id.
339. Id. at VI-51.
340. Id.
341. Id.
342. Id. The INSURANCE STUDY's review of underwriting rules confirmed the imbalance, but concluded that the problem was being corrected. INSURANCE STUDY, supra note 14, at 1-43. See also Final Report, supra note 14, at VI-51.
insurance premiums. Although this conclusion is based on limited data, to the extent it is true, firms will have less incentive to develop loss prevention programs or to participate in those of their insurer. Thus, while it is true that under the present system product liability litigation and its consequences have led to greater development of loss control programs, both by companies and their insurers, the extent and impact of those programs is difficult to measure. The programs are less frequently utilized in smaller firms, where the negative consequences of the product liability problem tend to be concentrated. The insurance industry also provides little incentive to develop such programs, because product liability insurance premiums are unrelated, or are at least perceived to be unrelated, to the development or use of prevention programs.

C. Uncertainty in the Tort Litigation System and Its Effect on Consumers

As difficult as all of the effects of the product liability problem are to measure, assessing its impact on consumers remains the most elusive. This is probably because most effects on the consumer are essentially derivative. Increased insurance costs may ultimately affect the price the consumer pays for a product. A decision not to develop or to stop marketing a product ultimately restricts the consumer’s choice in the marketplace. A decision to “go bare,” because insurance is too costly or truly unavailable, ultimately determines whom in the distribution chain an injured consumer can sue, whether the consumer can collect a judgment rendered, and perhaps even the threshold question of whether the consumer should sue at all. Because these effects flow only indirectly from the uncertainty in the tort litigation system, it is of course more difficult to measure their impact. It is, however, important to discuss potential effects on the buying public because opponents of tort reform often charge that such legislation is anticonsumer. Whether this criticism is accurate depends on the substantive content of the final legislative product. But it is also incorrect and misleading to assume that the present system only benefits consumers. Consumers also pay the price of uncertainty.

1. The Effect of Uncertainty on the Price of Products

One of the underlying concepts of product liability is loss spreading. That is, it is more equitable for a loss to be spread evenly among all purchasers of the product, than for each injured plaintiff to have to bear the burden of a single accident. This con-

343. See Final Report, supra note 14, at VI-52.
except necessarily implies that, as greater liability is imposed, the price of products will increase. Similarly, one would expect that as uncertainty in the tort system imposes its cost—most directly expressed through higher insurance premiums—the price of products would rise.

It is difficult to measure precisely how much the costs associated with product liability add to the price of products. Opponents of tort reform often point to the fact that product liability insurance usually costs less than one percent of a firm's sales. They seem to assume that this figure also represents the percentage of a product's cost attributable to product liability. Such a conclusion represents, at best, a serious oversimplification. Insurance premiums constitute only a small part of the total cost of product liability for manufacturers. Other costs include the administrative expenses, the cost of loss prevention programs, the cost of developing products that are held off the market, and legal expenses. In addition, others in the distributive chain from manufacturer to consumer pass along their product liability costs. The wholesaler and retailer also might face exposure to products claims. Thus, the ratio of the manufacturer's insurance costs to sales cannot be assumed to equal the percentage of a product's price that is related to product liability costs.

Although estimating the percentage of a product's cost attributable to product liability concerns is a complicated proposition, estimates have been made. Sporting goods manufacturers have alleged that fifteen percent of the price of their product is attributable to product liability concerns. Some machine tool manufacturers estimate that ten percent of their product's price reflects product liability costs, a figure that is probably a "high water mark" among larger industries. These figures seem to indicate that in certain high-risk industries, a large portion of the product price can be attributed to product liability costs. Another example is the airbag industry, where one manufacturer found its insurance costs jumping from ten dollars a unit to fifty dollars a unit, and finally was unable to obtain insurance at any cost.

There are other companies that find themselves in the opposite situation, wanting to pass along product liability costs, but unable to do so. Tort theorists often assume that any cost that is incurred can be automatically passed to consumers. This is not necessarily

344. See, e.g., id. at VI-15.
345. See id. at VI-28.
346. Id. at VI-27, VI-28.
347. Id.
348. Id. at VI-28.
349. See supra notes 308-17 and accompanying text.
true, competition forces manufacturers to keep their prices fairly close to those of their competitors in order to remain economically viable. If a firm has to spend much more than its competitors because of product liability costs, it will be impossible for that firm to pass along the entire cost and still remain competitive. This untenable situation can arise where a firm has been in business for many years, and its competitors have been in business for a short time. The older firm's insurance premium can reflect potential liability for products manufactured years ago but still in use. The older firm will be unable to pass along a portion of its product liability costs in order to compete with the new firms. This undermines the concept of product liability as a vehicle for spreading loss.

2. Uncertainty in the Tort Litigation System and Inequities in Loss Risk Distribution

Inequity in cost spreading is a key point in this Article's criticism of the uncertainties fostered by the present multiple jurisdiction system of product liability. While a California plaintiff can prevail on a "market share" theory, this approach is unavailable to plaintiffs who sue in many other states. Insurance companies, however, respond to developments in California and other leading jurisdictions in product liability law in assessing nationwide premium rates. These rates, which tend to be based on a "worst case" basis, are fixed according to the maximum exposure to liability in any jurisdiction. Thus, although consumers in a "conservative" jurisdiction will contribute to the financing of recoveries in "liberal" jurisdictions, they will at the same time lack the legal advantages offered injured plaintiffs in the "worst case" state. The inequity of this situation should be apparent. Why should consumers be forced to finance a remedy that is available only to plaintiffs in another state? This result also undermines any true notion of loss spreading. The loss cannot be spread fairly among those who use and benefit from a product if the remedy is not available to all.

3. Other Costs of Uncertainty to Consumers

While other costs of uncertainty to consumers have already been alluded to in other contexts, a brief summary is appropriate. As uncertainty restricts product development, consumers are de-

350. See, e.g., Joseph, supra note 328, at 56, col. 1.
351. See FINAL REPORT, supra note 14, at VI-27.
352. See supra notes 56-104 and accompanying text.
353. See supra notes 225-28 and accompanying text.
354. See supra note 227 and accompanying text.
prived of product choices that would otherwise be available to them. For certain product-related situations, for example, those involving vaccines, the overall level of consumer safety may actually be decreased. A vaccine may not be marketed because its makers fear million dollar claims for side effects in a small number of cases per millions of doses, even though the vaccine could save thousands of lives. If this happens, the overall negative effect on the consuming public is substantial. This is an ironic result in a system that claims to increase incentives to make products safe by holding manufacturers strictly liable.

Lack of affordable insurance for manufacturers of certain products can also impose costs on consumers. For example, if a manufacturer has decided to "go bare" because of soaring insurance costs, an injured consumer may try to sue the retailer, or someone else in the product's distribution chain. The manufacturer's lack of insurance will also impair the retailer's right to indemnification should the latter be required to pay the judgment. In some cases, insurance availability may make it impractical for the claimant to sue at all, or impossible for him to collect a judgment.

IV. THE NEED FOR FEDERAL REFORM

The previous sections of this Article have catalogued the diversity of existing product liability laws and have demonstrated some of the qualitative and quantitative costs of this lack of uniformity. Assuming that uniformity has been proven to be a desirable goal, the only remaining question is how best to achieve that result. This section argues that federal legislation is the most effective mechanism through which to establish a uniform law of product liability.

A. The Inherent Inability of State Law to Achieve Uniformity

This Article has previously argued that present product liability reforms at the state level have done nothing to alleviate uncertainty. The following discussion goes beyond the diversity of current reform efforts to explain why state reform cannot achieve a desirable uniformity. The federal government has thus far opted for a model uniform law approach which does not directly interfere with the present substantive state law. This approach, however, is unlikely to achieve uniformity.

355. See supra notes 293-96 and accompanying text.
356. It might also make it difficult for injured parties to obtain legal counsel on a contingent fee basis.
357. See generally supra notes 173-95 and accompanying text.
358. See supra notes 15-16 and accompanying text.
1. **Why a Model Uniform Law Cannot Achieve Uniformity in the Tort System**

a. **Uniform Laws Are Not Uniformly Adopted**

One significant barrier to any uniform approach to product liability law is that the statute cannot foster uniformity unless it is adopted by a large number of the states. The history of the uniform law movement indicates, however, that widespread adoption is often the exception rather than the rule. For example, of the seven uniform acts that were predecessors to the Uniform Commercial Code (UCC), only three—the Uniform Negotiable Instruments Law, the Uniform Warehouse Receipts Act, and the Uniform Stock Transfer Act—were adopted in every state.\textsuperscript{359} The Uniform Sales Act, the predecessor of Article 2 of the UCC, was adopted in only two-thirds of the states, as was the Uniform Trust Receipts Act. The remaining two acts were even less well-received than the Sales Act or the Trust Receipts Act.\textsuperscript{360}

Lack of uniform adoption continues to plague the uniform law movement today. While some uniform acts are adopted in all, or nearly all, jurisdictions,\textsuperscript{361} others have not been adopted in any jurisdiction,\textsuperscript{362} or by only a handful of jurisdictions.\textsuperscript{363} Some have

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\textsuperscript{360} Professors White and Summers report that the Uniform Stock Transfer Act was adopted by less than two-thirds of the states. J. White & R. Summers, Handbook of the Law of the Uniform Commercial Code 2-3 (1980). However, both the Handbook, Uniform State Laws, supra note 359, and Taylor, supra note 359, show that it was adopted in every state.


been adopted in a substantial number of jurisdictions. According-ingly, although some uniform acts can be characterized as successful, if the level of adoption is accepted as one measure of success, other uniform acts are dismal failures.

If the level of adoption is the measure of success, then the Model Uniform Products Liability Act must presently be characterized as a failure. While there has been a flurry of product liability reform legislation at the state level in the last few years, the Model Uniform Act has yet to be adopted by any state. Although a few commentators have suggested adopting a wait-and-see attitude about the Model Act, a more realistic assessment is that it will never be widely adopted at the state level.


365. It is not the intention of this Article to imply that the level of adoption is the only measure of success. Indeed, many finely drafted uniform acts might not be adopted because they are politically infeasible. Such might be the case with the model Uniform Product Liability Act itself. Other acts might not be adopted because they are not perceived to be important enough to warrant initial legislative action, or changing existing state law. In the final analysis, however, a uniform law obviously must be widely adopted if it is to have a significant impact, and if it is to achieve uniformity.

366. See supra note 15.

367. See supra notes 12-13 and accompanying text.

368. One commentator has characterized the Model Act's effectiveness as follows: "The smoke of discussion has thus far exceeded the fire of enactment. Even where the UPLA has inspired state legislation, the resulting legislation is quite different from the UPLA in its present form." Ribstein, The Model Uniform Product Liability Act: Pinning Down Products Law, 46 J. Air L. & Com. 349, 355 (1981) (footnote omitted).

369. See, e.g., remarks of Homer E. Mayer (Carter Administration's Commerce Dept. General Counsel) ("It is premature to gauge the state reaction to the Uniform Product Liability Act. . . . [T]he state legislatures have had only a few months to review it in its final form."), quoted in, Fisher, Carter Backs State Level Tort Reform, Nat'l Underwriter, May 2, 1980, at 1, col. 2.

370. See, e.g., Ribstein, supra note 368, at 355-56: "If the future of the UPLA is in the states, its history to date would suggest that it is highly unlikely that it
Even if the model uniform law approach were ultimately successful, in the sense that a majority of the states adopt the Act, the approach would still be unwieldy and would yield few benefits because of the time lag inherent in state-by-state adoption. Even the most successful state-adopted uniform laws have experienced this difficulty, with the Uniform Commercial Code providing a prominent example. The idea of a comprehensive commercial code was conceived in 1940, when the Commissioners on Uniform State Laws decided to draft a revised Sales Act as the basis for a comprehensive code. After the American Law Institute joined the project in the mid-1940s, a final official draft was issued in 1952. This version was adopted by only one state, Pennsylvania. After criticism of the initial effort by the New York Law Revision Commission, a revised version of the Code was published in 1958. By 1961, thirteen states had enacted the UCC. By 1967, forty-nine states had adopted the 1962 version. In 1972, further revisions were made, primarily to Article 9. Thus far, thirty-nine jurisdictions have adopted the 1972 version of the Article. In 1977, the Permanent Editorial Board promulgated a new Official Text making revisions in Article 8 on Investment Securities. Five states have adopted the 1977 version of Article 8.

The experience with the UCC demonstrates two inherent difficulties with state-by-state enactment of uniform laws. The first is a time lag in initial adoption. It took twenty-seven years from the time the UCC was conceived in 1940 until it was finally adopted by forty-seven states in 1967. The second difficulty is the time lag in

371. See Legal Study, supra note 14, at 71-72.
372. Interestingly, the idea appears to have originated in response to an effort to enact a Federal Sales Act. See Taylor, supra note 359, at 340-41.
373. Id. at 341. See generally J. White & R. Summers, supra note 360, at 3-6.
374. Taylor, supra note 359, at 341. These states enacted the 1958 version.
375. Id. The lone dissenter was the "lost tribe" of Louisiana. Although that state has adopted articles 1, 3, 4, 5, 7 and 8 of the U.C.C., Louisiana has not adopted the two most prominent articles of the Code Article 2 on Sales and Article 9 on Secured Transactions. Nor has it adopted Article 6 on Bulk Transfers. 1 U.L.A. 1 & n.3 (Supp. 1983).
376. Taylor, supra note 359, at 341.
378. Id.
379. Id.
380. Even if one does not count the 12 years of development prior to the promulgation of the first official text in 1952, the time lag is the rule rather than the exception: "[T]rue required twenty-eight years to have the N.I.L. enacted by all the states, fifteen years to accomplish the same result with the Uniform Warehouse Receipts Act and forty-seven years to have the Uniform Stock Transfer Act adopted in every jurisdiction." Schnader, Why the Uniform Commercial Code Should Be "Uniform", 20 Wash. & Lee L. Rev. 237, 239
the adoption of revisions to the law. Article 9 is the prime example here. Although the 1972 revision of Article 9 has been in existence for eleven years, fourteen states have yet to adopt it. Thus, there are two Article 9's: two versions for lawyers to master, for students to learn, for teachers to teach, and for writers to write about—two versions of one of the most important articles of what is supposed to be a Uniform Commercial Code.381 Thus, when revisions in uniform laws are adopted on a state-by-state basis, the same confusion and lack of uniformity that permeated the law prior to widespread adoption of the Code will appear again as revisions are adopted on piecemeal basis, a cycle that will repeat itself as more revisions are made.

b. The Best Uniform Laws Cannot Achieve Uniformity

Even if one assumes that a uniform product liability law will be adopted by nearly all of the states, state-by-state enactment will not achieve a truly uniform statutory scheme. The UCC demonstrates that even the most successful uniform law cannot achieve true uniformity.382 The truth of this observation is evidenced by open-ended and optional drafting, non-uniform amendments, and interpretational differences.

Open-ended and optional drafting are two related, but slightly different, methods of drafting that inject a facial uncertainty into the statutory scheme. “Open-ended” drafting occurs when the statute itself uses vague and general language. Examples of open-ended drafting in the UCC include the use of terms such as “reasonable,” and “good faith.”383 Optional drafting, on the other hand,
is exemplified by sections that allow the states to adopt one of two or more statutory alternatives designed to cover a particular type of transaction. While open-ended and optional drafting undoubtedly contribute to the diversity between differing states' versions of the UCC, these techniques may not represent a serious deficiency in the state-by-state approach, since the difficulties presented by optional provisions can be remedied by different drafting techniques. The confusion caused by open-ended provisions, however, may be unavoidable. Problems created by the open-ended technique, therefore, might be present to some degree even in a statute adopted at the federal level.

The second major reason that even a widely-adopted uniform law will never be truly uniform is the ubiquitous existence of non-

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may occur in good faith, except a party may not tender a quantity unreasonably disproportionate to any stated estimate); § 2-504(a) (if seller is required or authorized to send the goods to a buyer and is not contractually required to deliver them to a particular destination, seller must make a reasonable contract of carriage for their transportation); § 2-603(3) (in complying with duties regarding rightfully rejected goods, buyer is held only to good faith standard).

The concept of good faith under the Code is made even more uncertain by two definitions of good faith. Section 2-103(1) gives the general definition of good faith: "honesty in fact in the conduct or transaction concerned." Section 2-103(1)(b), however, applies a stricter standard to a merchant with regard to the sale of goods. Good faith in the latter context means: "honesty in fact and the observance of reasonable commercial standards of fair dealing in the trade." U.C.C. § 2-103(1)(b) (emphasis added). Of course, the italicized part of the latter definition is itself a prime example of open-ended drafting.

384. J. WHITE & R. SUMMERS, supra note 360, at 8. Examples of this type of drafting include: § 9-401 (three alternatives for the place of filing Article 9 financing statements); and § 2-318 (three alternatives as to third party beneficiaries of warranties, i.e., priority requirements in warranty actions). Similarly, § 6-106 imposes a duty on a bulk transferee to pay the creditors of the transferors; however, the section is optional at the discretion of the individual state.

Of course, the three alternatives under § 2-318 prevent the UCC from adding any degree of certainty to the warranty branch of product liability law. See Taylor, supra note 359, at 345-46.

385. This position is may not necessarily prove true. For example, if three versions of a controversial section are necessary to assure that a uniform law is well received (so that each state can adopt a version that suits it), then optional drafting represents an inherent deficiency in state-by-state adoption.

On the other hand, if the alternatives merely reflect confusion in the previous state of the law, or disagreement among the statute's draftsmen, then optional drafting does not inherently discredit state-by-state adoption, but does discredit the draftsmen who were supposed to produce a "uniform" law.

386. Unavoidable ambiguity reflects the truism that a comprehensive statute cannot provide for all contingencies. Thus, a certain looseness in the statute, and the use of vague terms such as "good faith" and "reasonableness" may be necessary because some legal principles cannot be precisely defined. See Taylor, supra note 359, at 349-52.
uniform local amendments.\(^{387}\) One of the chief reasons for the promulgation of the UCC was that there were so many non-uniform modifications of the Uniform Negotiable Instruments Law.\(^{388}\) The drafters assumed that this problem would not plague the UCC. They predicted that it would be adopted "without a single variation from the text approved by the Code's Editorial Board."\(^{389}\) The potentially destructive impact of non-uniform amendments, however, had become apparent by 1966:

Today, there are upwards of 750 non-uniform variations in the 49 Codes which have been adopted by American jurisdictions. There is some consolation in the fact that 195 of the Code's 399 sections have not been amended by any state, and that 76 additional sections have each been amended by only a single state. This all adds up to having something more than 50% of the Code's section substantially uniform throughout 49 of our jurisdictions. But the clear fact is that the entire code as written on our statute books, just isn't uniform.\(^{390}\)

This lack of uniformity in the UCC has led commentators to suggest its adoption at the federal level.\(^{391}\) But diversity in the statutory language is not the only reason to advocate federal adoption.

c. Different Interpretations of Uniform Provisions

When a particular uniform law is adopted widely, and the specific provision is neither open-ended, optional, nor varied by local amendment, a final barrier to uniformity still remains under the state-by-state approach: disparate state court interpretations of the law. Uniform acts prior to the UCC suffered due to multiple interpretations of individual sections. For example, seventy-six of the 198 sections of the Uniform Negotiable Instruments Law had been subjected to multiple interpretations by 1958.\(^{392}\) These varying interpretations destroyed the effect of uniformity that the acts might have brought to commercial law, and provided a principal impetus for drafting the UCC.\(^{393}\)

Unfortunately, UCC sections have also fallen prey to multiple interpretations from state courts. Many such interpretations have been noted by the commentators, and a comprehensive listing of

\(^{387}\) "Local" is used here in the sense that the amendment is unique to the adopting state.

\(^{388}\) See Schnader, Why the Code Should Be Uniform, supra note 380, at 239.


\(^{390}\) Id. at 230-31.

\(^{391}\) E.g., id. at 231-33. See also Henson, The Problem of Uniformity, 20 Bus. Law. 689, 695 (1965).

\(^{392}\) See Taylor, supra note 359, at 339. By the time the UCC was prepared, more than 80 sections of the NLL were subject to differing interpretations. Minahan, The Eroding Uniformity of the Uniform Commercial Code, 65 Ky. L.J. 799, 801 (1977).

the variations is beyond the scope of this Article. One commenta-
tor, however, has summarized some of the interpretational ques-
tions on which different jurisdictions have reached different
answers:

Does the sale of a radio station constitute a "sale of goods" within the
scope of Article 2? Is an agreement to provide data processing services
within the scope of Article 2? Are farmers "merchants" within the mean-
ing of Section 2-207? Does the Code require an "as is" disclaimer to be
conspicuous? Do implied warranties apply to injuries to animals? Does a
payee have any interest in a negotiable instrument prior to delivery?
Does the "any person" language in UCC Section 3-406 apply to a certifying
bank? Does the term "equipment" constitute a sufficient description of
collateral in a security agreement? May an auto dealer who purchases
cars from another auto dealer qualify as a buyer in the ordinary course of
business? When does the 10-day grace period in UCC Section 9-312(4)
commence to run if the collateral was in the possession of the debtor
before the execution of a purchase money security agreement?394

Another commentator has subdivided interpretational vari-
tions into two categories: interpretational mishaps, and legitimate
differences.395 The former category involves inaccurate interpreta-
tions of the code section in question; in other words, mistakes.396
The latter category simply recognizes that in close cases of statu-
tory interpretation, reasonable minds can reach different, but rea-
sonable, results.397 Legitimate interpretational differences represent an inherent defect in the ability of the state-by-state ap-
proach to achieve uniformity: "[L]egitimate interpretational dif-
ferences are inevitable if there is not one final arbiter of the
meaning of a statute."398 Because there is no single supreme court
to reconcile variations which arise under the UCC, interpretational
uniformity is a practical impossibility, even if the courts use proper
methods of statutory interpretation.399

394. Minahan, supra note 392, at 802-03 (citations omitted). See also Note, supra
note 393, at 745-50.
396. An example of such an error is the frequently cited and much maligned case
of Roto-Lith, Ltd. v. F.P. Bartlett & Co., 297 F.2d 497 (1st Cir. 1962) (holding
that the common law "last shot" contract formation doctrine in "battle of the
forms" situations survived the clear language of UCC § 2-207). See Taylor,
supra note 359, at 357-58 (criticizing Roto-Lith for judicially rewriting U.C.C.
§ 2-207(1) and repealing U.C.C. § 2-207(3)).
397. Taylor lists the question of whether a buyer must prove reliance on an ex-
press warranty under UCC § 2-313 as an example of an issue upon which
courts could legitimately differ, and have differed. Taylor, supra note 359, at
359-61.
398. Id. at 358. See also Minahan, supra note 392, at 819-20.
399. The Supreme Court of the United States cannot presently fill this position of
"final arbiter" for a number of reasons. First, in a UCC case brought in fed-
eral court on the grounds of diversity of citizenship, 28 U.S.C. § 1332 (1982),
the federal court would be constrained under the Erie doctrine, see supra
note 170, to apply the law of the state in which the district court is sitting.
State court provincialism also often fosters interpretational mishaps. Such provincialism manifests itself in several ways. For example, a jurisdiction may ignore the decisonal law of other states that have adopted the uniform law. When uniform laws are adopted on a state-by-state basis, uniformity of interpretation can be achieved only if the decisonal law of sister states is considered. Experience with the UCC demonstrates that state courts will take widely divergent views as to the precedential value to be given to sister state decisions interpreting identical code provisions. While some courts follow, or at least consult, the decisions of sister states as a matter of course, others completely ignore such precedent. The vast majority of state courts express a viewpoint somewhere between these two extremes. Even when a decision appears consistent with sister state decisions, however, the similarity may be merely accidental, in that it reflects a continuance of that state's prior law "rather than a conscious promulgation of foreign code precedent."

In a related vein, courts interpret uniform laws in accordance with their own state's prior law. Many courts have taken this approach in UCC cases. Although the use of earlier non-code law is arguably acceptable as a gap-filling device and an aid to interpretation and construction, some courts have viewed prior law as viable unless clearly displaced by the UCC. This approach endangers uniformity: it places a premium on non-uniform law that existed prior to the uniform act. The third, and most egregious, type of provincialism manifests itself in decisions where state courts rely on their previous law, even when it has been.

Thus, in diversity cases, there can be no overriding federal law to provide uniformity; the federal court must try to decide the case as the state court would, and any judicial review is also predicated on state law.

Second, a state statute is unlikely to present a federal question arising "under the constitution, laws, or treaties of the United States." 28 U.S.C. § 1331 (1982). Although there may be exceptional UCC cases that do raise federal questions, or that find their way to the Supreme Court under other jurisdictional statutes, such cases do little or nothing to provide uniformity of interpretation, since they only resolve questions peripheral to the interpretation of the state law. See, e.g., Flagg Bros., Inc. v. Brooks, 436 U.S. 149 (1978) (holding there was no "state action" in a warehouseman's private sale of goods entrusted to him as permitted by the self-help provision of U.C.C. § 7-210).

400. See Minahan, supra note 392, at 819-21.
401. See id. at 820.
403. See Minahan, supra note 392, at 819-20.
404. Id. at 818-19 n.86.
405. Id. at 819.
406. Id.
clearly displaced by the uniform law's provisions. Obviously, any prospects of uniform interpretation are eliminated when a court chooses this approach to statutory interpretation.

2. Other Problems With State Adoption of Uniform Law

State courts interpreting newly adopted uniform law through the filter of their previous idiosyncratic law erect substantial barriers to uniformity. There is also the danger, however, that a court may actually interpret a statute out of existence. An example from the analogous field of medical malpractice law is illustrative. In Helling v. Carey, the Supreme Court of Washington held, as a matter of law, that ophthalmologists were required to administer glaucoma tests to all patients, regardless of age. The custom of the profession had been to check routinely for glaucoma only in patients older than age forty. Thus, Helling held ophthalmologists to a higher standard of care than was the custom of their profession.

The state legislature responded to Helling in 1975 with the following legislative mandate:

In any civil action for damages based on professional negligence against . . . [any] member of the healing arts . . . the plaintiff in order to prevail shall be required to prove by a preponderance of the evidence that the defendant or defendants failed to exercise that degree of skill, care and learning possessed by other persons in the same profession . . .

In spite of the seemingly clear language of the statute, the Washington Supreme Court held, in Gates v. Jensen, that the judicially created Helling rule was not abrogated by the statute. The

407. Note, supra note 393, at 730. This is probably what happened in Roto-Lith, Ltd. v. F.P. Bartlett & Co., 297 F.2d 497 (1st Cir. 1962). As one commentator observed: “In places in the opinion, one gets the impression that the court simply could not believe what it said when it adopted § 2-207.” Taylor, supra note 359, at 357 n.77.

408. See supra notes 394-407 and accompanying text.

409. This danger is quite similar to the most egregious form of provincialism, in which a court applies prior law that has been clearly displaced by a uniform law. See supra note 407 and accompanying text. This concern is broader, because it applies to all types of state laws, and not merely to uniform laws. The problem is, however, closely related.

Of course, this is yet another way to characterize the infamous Roto-Lith case. See supra notes 396 & 407.


411. Id. at 516, 519 P.2d at 982, 983.

412. Such a holding is based on the premise that sometimes an entire industry or profession may adhere to a standard of care that is less than reasonable. Such analysis is not new to the law. See The T.J. Hooper, 60 F.2d 737, 740 (2d Cir. 1932) (coastline carriers' general practice of using tugs that are not equipped with radios was an unreasonable commercial standard).


majority noted that the original bill introduced in the House would have established the standard of care as "that skill and care practiced by others in the same profession and speciality,"\(^{415}\) while the statute as enacted required physicians "to exercise the skill, care and learning possessed by others in the same profession."\(^{416}\) The majority summarily stated that the statute, as enacted, used broader language, which allowed application of the *Helling* rule.\(^{417}\)

In his strong dissent, Justice Dolliver noted that the legislative history of the bill, as expressed in committee reports, clearly and expressly sought to overrule *Helling*.\(^{418}\) The dissent concluded by saying the plaintiff's proposed instruction, as adopted by the majority, was "absolutely contrary to the mandate of the legislature."\(^{419}\) Viewed in this light, it now appears that Judge Hand's famous words concerning the common law standard of care, that "[c]ourts must in the end say what is required,"\(^{420}\) now apply even when the legislature acts to override a court's previous pronouncements.

In a related vein, the fact that a reform would pass constitutional muster, if enacted by Congress and upheld by the Supreme Court, does not mean that similar state reform will be upheld by state supreme courts under state constitutional provisions.\(^{421}\) "Technical" barriers are frequently found in state constitutions that provide, for example, that a legislative bill may contain only one subject, and that this subject must be reflected in the title of the bill.\(^{422}\) While these provisions vary from state to state, they can trap the unwary reformer, and may totally invalidate a statute. Although such provisions constitute "mere technicalities," they are constitutional guarantees.\(^{423}\)

More important, however, is the possible impact of substantive state constitutional provisions, including state equal protection

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415. *Id.* at 253, 595 P.2d at 924.
416. *Id.* at 253, 254, 595 P.2d at 925.
417. *Id.* One judge, however, noted the majority's lack of elaboration as to why "possessed" was necessarily broader than "practiced." *Id.* at 256, 257, 595 P.2d at 926 (Dolliver, J., concurring in part and dissenting in part).
418. *Id.* at 256, 257, 595 P.2d at 925 (Dolliver, J., concurring in part and dissenting in part).
419. *Id.* at 257, 595 P.2d at 926 (Dolliver, J., concurring in part and dissenting in part).
420. The T.J. Hooper, 60 F.2d 737, 740 (2d Cir. 1932).
421. Of course, a state supreme court is the ultimate arbiter of that state's constitutional provisions. A state may grant greater protections under its constitution than granted by the U.S. Constitution. Pruneyard Shopping Center v. Robins, 447 U.S. 74, 81 (1980); Cooper v. California, 388 U.S. 58, 62 (1967).
423. *See generally id.* at 278-79.
and due process clauses, and provisions guaranteeing access to the courts. Legislation in areas similar to product liability has been invalidated under such provisions.\textsuperscript{424} State product liability reform legislation has also been challenged under these provisions with, as might be expected, differing results. In \textit{Batilla v. Allis-Chalmers Mfg. Co.},\textsuperscript{425} the Supreme Court of Florida struck down Florida's twelve-year statute of repose for product liability actions as violative of the state constitutional guarantee of access of the courts. The Supreme Court of Indiana, however, rebuffed the constitutional challenge to a repose statute under a similar state constitutional provision.\textsuperscript{426}

Many state reform statutes have yet to be challenged. But these initial cases demonstrate that it is certainly possible that many present statutes will be struck down. Then, too, if a uniform statute were widely adopted (on a state-by-state basis), it would be subject to constitutional challenge in every state, and under widely varying constitutional provisions. Even when the constitutional provisions are similar, state courts will often interpret them

\textsuperscript{424} The cases on medical malpractice reform are collected in Annot., 80 A.L.R.3d 583 (1977).

\textsuperscript{425} 392 So. 2d 874 (Fla. 1980).


Both Florida and Indiana have rebuffed challenges to their statutes of repose under their state's constitutional title/subject matter provisions. Dague v. Piper Aircraft Corp., 418 N.E.2d 207, 213-15 (Ind. 1981) (the Indiana provision without a corresponding limitation on the title); Purk v. Federal Press Co., 387 So. 2d 354, 358 (Fla. 1980) (title was sufficiently detailed to reasonably serve notice to interested parties).
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differently. In addition, different parts of a state-adopted uniform law or code would probably be struck down in different states, thus making a shambles of any notion of uniformity.

B. Objections to Federal Products Liability Reform

Although a state-by-state approach will never achieve a meaningful level of uniformity in product liability law, many argue that federal legislation is not the answer. There are both theoretical and practical objections to federal reform.

1. Theoretical Objections to Federal Reform

a. Interference with States' Rights and Preemption of the "Laboratory of Ideas" Concept

The states’ rights objection, and the laboratory of ideas argument, are closely related. The latter argues that state experimentation with different approaches to a particular legal problem will eventually reveal the most effective solution, and it is used as a justification for the more general concept that tort doctrines should remain the common law province of the states. Thus, these objections will be treated together.

The federal government has generally refrained from entering the field of state common law tort development. Congress has, however, used the established power of the commerce clause to preempt traditional state tort law in certain areas in order to establish uniformity. The most prominent example of its pursuit of tort uniformity through federal reform is the Federal Employers' Liability Act (FELA). FELA preempts state law regarding injuries to railroad workers. When Congress passed the statute in 1908, as a response to the industrial revolution and laissez faire economics, it acted in an era when railroad law was synonymous

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427. 4 LEGAL STUDY, supra note 14, at 73-74; INSURANCE STUDY, supra note 14, at ES 13-14.
428. U.S. CONST. art. I, § 8, cl. 3.
430. See Griffith, The Vindication of a National Public Policy Under the Federal Employers' Liability Act, 18 LAW & CONTEMP. PROBS. 160 (1953):

The period intervening between the beginning in America of the railway epoch and the final enactment of the Federal Employers' Liability Act in 1908, saw the rise and fall of laissez faire—the doctrine of non-interventions by government in matters concerning Labor. That doctrine...in which the laborer was regarded merely as a chattel in the hands of capital, bore down with heavy tragedy upon the operating railroad man.

Id. at 163.
with state tort law.431

Lack of uniformity in state regulation, as well as inherent job danger, contributed to the short working life of railroad employees.432 A brakeman’s chances of dying a natural death in 1888, for example, were 1 to 4.7,433 and the average life expectancy of a switchman in 1893 was seven years.434 Casualties from working on the railroad rivaled those sustained during numerous battles of the Civil War.435 Courts interpreting FELA, therefore, characterized it as remedial and humanitarian.437 These interpretations arose because FELA offered broader remedies to injured employees than those that previously existed under state tort law.438

Under FELA, contributory negligence only diminishes recovery in proportion to the employee’s negligence, rather than barring recovery, and assumption of risk is not available as a defense.440 Both of these defenses had traditionally precluded recovery by injured workers under state tort law.441 Congress, therefore, preempted a major area of state tort law when a uniform law was necessary to protect railroad workers. Since that time, Congress has extended the same uniform law to another group in need of protection (merchant seamen) under the Merchant Marine Act of 1920, commonly known as the Jones Act.442 In construing each of these acts, the Supreme Court resolves differences of interpretation between the circuits, thus preserving uniformity.

Although states’ rights concerns may prove to be a political barrier to enactment of federal product liability legislation,443 the

431. As one commentator observed:

Almost every leading case in tort law was corrected, mediatly or immediately, with this new and dreadful presence. In this first generation of tort law, the railroad was the prince of machines, both as symbol and as fact. It was the key to economic development. . . . Yet trains were also wild beasts; they roared through the countryside, killing livestock, setting fires to crops, smashing passengers and freight. Railroad law and tort law grew up then, together. In a sense the two were the same.


432. See Griffith, supra note 430, at 162.

433. Id. at 162-63 (citing Third Annual Report of the Interstate Commerce Commission 85 (1889)).

434. Griffith, supra note 430, at 162.

435. Id. at 165 (quoting Address by Edward A. Mosely, reproduced in 10 R.R. TRAINMEN’S J. 930-39, 853 (Oct., 1893)).


443. See 1 LEGAL STUDY, supra note 14, at 32-33.
FELA demonstrates that the real question should be whether or not these concerns form the basis of a valid objection to federal action. One can accept the principles of federalism and still recognize that national problems must be dealt with by the federal government. Product-related injuries are a national problem. Insurance rates are set on a national basis, and many products are distributed in all fifty states. As a national problem, the product liability problem calls for a national solution. State statutory reforms have not only failed to relieve uncertainty, but have exacerbated it, and even a widely-adopted state uniform law would fail to provide the necessary certainty. If there is to be a solution, it must come from the federal government.

Similarly, although the concept of each state serving as a "laboratory" to experiment with different approaches to a complex problem is attractive in theory, it exacts a high price in uncertainty from manufacturers, insurers, and even consumers. In fact, the years of experimentation with tort theories have created the present product liability morass. As Professor Schwartz has noted:

While state experimentation is a valid goal, the state courts have had decades to explore a product liability law. There is a wide range of alternative approaches from which to choose, and, in light of the magnitude of the product liability problem, experimentation may come at too high a price.

Moreover, even conceding the basic validity of the laboratory of ideas concept, certain institutional barriers prevent the states from serving as sterile laboratories. In order to be meaningful, an experiment must be controlled: that is, kept independent of outside influences. Certain factors in the present product liability system, however, contaminate state experimentation. It has been demonstrated that product liability rates are highly judgmental, and are

444. See supra notes 224-25 and accompanying text. In the Introduction to the Model Uniform Act, the Department of Commerce emphasized the uniquely national character of the products liability problem: "Uniformity and stability in this area are needed because product liability rates are set on a countrywide basis. Thus, product liability law differs from medical malpractice, automobile, and other standard lines of liability." 44 Fed. Reg. 62,714, 62,714 (1979).

445. See supra notes 173-195 and accompanying text.

446. See supra notes 382-407 and accompanying text.


448. The LEGAL STUDY notes that: "While it is true that a 'patchwork' of conflicting and confusing rules is a basic characteristic of the process of development of legal principles by state common law processes, recognition of this tenet of jurisprudence makes the situation no more palatable to products manufacturers." 4 LEGAL STUDY, supra note 14, at 70.

449. Schwartz, supra note 10, at 585.
heavily influenced by the worst possible theory of liability (from the insurer's perspective) adopted in any jurisdiction.\textsuperscript{450} Thus, any one state's action will be meaningless, unless it establishes a new outer limit of liability, or pulls back a previously-established outer limit. Conservative judicial interpretations or legislative reforms in any one state will, therefore, have no impact on product liability rates.\textsuperscript{451} This inherent inadequacy of state reform has led several governors to veto their state's reform measures.\textsuperscript{452}

"Worst case" liability controls on insurance rates both prevent the states from functioning as laboratories of ideas, and prove that the state-by-state approach is the antithesis of controlled federalism. States can take no effective action of their own; they are controlled by the actions of sister states. The state-by-state approach forces manufacturers, and ultimately consumers, to pay insurance premiums based on legal policies of the most liberal state. Yet consumers in a conservative product liability jurisdiction may not be afforded the liberal judicial remedy upon which a manufacturer's premium is based. This situation is somewhat analogous to the economic balkanization that led to the downfall of the Articles of Confederation. This balkanization was, of course, remedied by the Constitution's supremacy clause,\textsuperscript{453} which made federal law the supreme law of the land. Similarly, federal product liability reform is the only effective manner in which to achieve certainty in the field of product liability and thereby avoid a system in which the actions of one state control consequences in all others.

\textbf{b. Prohibition of Common Law Development of Changes in Legal Rights and Remedies in Response to New Conditions}

The law is not static. One of the benefits of common law legal development has been its ability to change with the times, to provide redress for new types of injuries, and to respond to changing social conditions.\textsuperscript{454} Certainly, any law that seeks certainty must sacrifice some degree of flexibility. Accordingly, the issues regarding federal tort reform are whether the increase in certainty outweighs the loss of flexibility, and whether the loss in flexibility can be minimized.

Although the costs of uncertainty have been documented, many

\begin{flushleft}
\textsuperscript{450} See supra note 227 and accompanying text.
\textsuperscript{451} See supra note 228 and accompanying text.
\textsuperscript{453} U.S. CONST. art. VI, cl. 2.
\textsuperscript{454} For a thorough discussion praising the benefits of such a system, see Ursin, supra note 447.
\end{flushleft}
have supported the position that common law development assures laws that adapt to changing conditions and times. This was the argument of Roscoe Pound when he noted that: "An uncodified law able to develop experience by reason and test reason by experience is proving to make our law of torts equal to its task by working out principles—starting points for reasoning—in the orderly course of judicial decision." Others have spelled out dangers of seeking certainty through statutes. They argue that because statutes have primacy over judicial interpretation, statutes lack the flexibility necessary in the face of constantly changing conditions. Statutes, in other words, become obsolete, yet political realities often prevent their repeal or amendment.

There are, however, legislative solutions available that remove such objections. For example, a "nonprimacy of statutes act" could treat a uniform product liability statute, twenty years after its enactment, as if it were a common law principle. The effect of such an act would be to allow courts to limit, extend, or overrule the statute based upon information and/or legal arguments gathered since its enactment. Allowing such treatment of a uniform product liability act would validate the judicial revision already engaged in by the courts, and would keep them from trying to achieve "just" results through indirect means, which in turn impair other legal principles.

Other drafting procedures could also minimize the loss of common law flexibility. Certain sections of a uniform federal statute could be drafted so as not to foreclose relief for types of injuries that have yet to manifest themselves. In addition, Congress could establish a permanent board to review federal product liability law, and to propose revisions to Congress as needed. While

457. See Davies, supra note 456, at 203.
458. Id. at 204-05.
459. Id. at 205.
460. See Calabresi, supra note 456, at 252-53. One of these indirect ways is noted both by Calabresi and Professor Gilmore, who observed that courts constitutionalized two issues, birth control and abortion, which were presented by unpopular and ancient statutes. Gilmore, Putting Senator Davies in Context, 4 VT. L. REV. 233, 239-40 & n.8 (1979).
461. For example, a statute of repose could be drafted to exclude injuries that manifest themselves over a long period of time—such as asbestos—from the operation of the limitation period.
462. It is well-known that there is a Permanent Editorial Board (P.E.B.) for the UCC. One of the chief reasons for establishing the P.E.B. in 1961 was the tendency of states to amend the UCC before they enacted it. See Minahan, supra note 392, at 899; Note, supra note 393, at 725.
this board would be directed to consider the overriding need for certainty before recommending revisions, it could provide a mechanism for truly needed change. Moreover, revision would be accomplished through a single enactment, rather than through the piecemeal approach of the present system, which further multiplies uncertainty.\textsuperscript{463}

In summary, while responsiveness is one of the great virtues of the common law, responsiveness in present product liability law is undermined by the balkanization inherent in the current system.\textsuperscript{464} Flexibility can be built into federal reform, allowing a necessary degree of responsiveness, while promoting a higher degree of certainty than is found presently in the law.

2. Practical Objections to Federal Reform

Various pragmatic objections have arisen to the concept of federal product liability reform. It is argued that political realities make federal reform unlikely, or that if a statute is enacted, it will be declared unconstitutional. It has also been asserted that such reform will burden the already staggering federal judicial system, and will not, in any event, resolve uncertainty in product liability.

Actually, the political prospects for federal product liability reform no longer appear bleak. Business and trade leaders are putting increasing pressure on Congress to adopt federal legislation,\textsuperscript{465} and the concept has been endorsed by the Reagan administration.\textsuperscript{466} In spite of opposition from the American Bar Association, federal product liability reform legislation was introduced in the 98th Congress both in the Senate\textsuperscript{467} and the House.\textsuperscript{468}

\begin{footnotesize}
\begin{enumerate}
\item One of the major causes of lack of uniformity in the UCC has been the unwillingness of states to follow the recommendations of the P.E.B. A glaring example is the experience with the 1972 revisions to Article 9: "Ironically, therefore, the promulgations of the 1972 Official Text may have an effect exactly the opposite of that intended: it may prove to be a permanent source of disparity in commercial law since it produces substantial variance between enacting and non-enacting states." Minahan, supra note 392, at 810. Of course, the P.E.B. has no means of imposing its revisions on the state. Id. at 809. Although such a Board under a national law would also lack the power to impose its recommendations on Congress, at least those recommendations would be accepted, rejected, or amended by only one body, and this uniformly.
\item See, e.g., supra notes 387-91 and accompanying text.
\item Bus. Ins., Oct. 5, 1981, at 1, 38.
\item Senator Kasten has reintroduced his bill (S. 2631, Product Liability Reform), which would create a national code for product liability. S. 44, 98th Cong., 1st Sess. (1983) (The Product Liability Act). At the same time, however, there is continued opposition to such a law by the American Bar Association [Current Report] PROD. SAFETY & LIAB. REP. (BNA) at 115 (Feb. 11, 1983).
\end{enumerate}
\end{footnotesize}
The assertion that product liability reform is political infeasibility is thus clearly premature.

Similarly, the argument that a federal product liability law, if adopted, would be found unconstitutional is also premature. The constitutionally of federal tort reform would turn, in part, on the content of the legislation adopted. There is, however, substantial reason to believe that a federal tort reform proposal would pass constitutional muster.

Opponents of federal reform suggest that such reform would violate equal protection by singling out one part of the common law tort system for change. Any statutory measure in this area, however, would be evaluated under the “rational basis” standard of equal protection review, rather than “strict scrutiny.” Establishing uniformity of product law is rationally related to the legitimate governmental purpose of trying to resolve problems created by the present patchwork of state laws and the resulting uncertainty.

A due process attack on federal reform would seem to be equally unavailing. It is well settled that a statute depriving either plaintiffs or defendants of common law remedies or defenses does


469. This point may be important in gaining political support for federal reform. It has been observed that, although many manufacturers and insurers favor federal reform, others support state-level reform, largely because they assume federal reform is unconstitutional. Bus. Ins., Nov. 1, 1976, at 1. If the skeptics could be convinced that federal reform is constitutional, they might reverse their pro-state stand.

470. The fifth amendment, which operates against the federal government, does not have an equal protection clause. However, an equal protection component has been incorporated into the fifth amendment’s due process clause, just as most of the protections of the Bill of Rights have been selectively incorporated to operate against the states through the fourteenth amendment’s due process clause. See, e.g., Jimenez v. Weinberger, 417 U.S. 628, 637 (1974) (provision in Social Security Act for determining eligibility of illegitimate children invalid); Bolling v. Sharpe, 347 U.S. 497 (1954) (racial segregation by D.C. public school system violated 5th amend. due process clause).

471. See 4 LEGAL STUDY, supra note 14, at 78. The basic framework of traditional equal protection analysis provides that:

We must decide, first, whether [the legislation] operates to the disadvantage of some suspect class or inpinges upon a fundamental right explicitly or implicitly protected by the Constitution, thereby requiring strict judicial scrutiny. . . . If not, the [legislative] scheme must still be examined to determine whether it rationally furthers some legitimate, articulated state purpose . . . .

not per se violate due process. The test is whether the statute bears a reasonable relationship to the permissible goals that it intends to further. The federal statute would obviously bear a reasonable relationship to the permissible goal of creating uniformity in the product liability system.

There is some question as to whether a statute abrogating common law remedies must provide a *quid pro quo* for those remedies in order to withstand due process attack, although the Supreme Court has never directly so held. The Court did suggest in *N.Y. Central R.R. v. White,* however, that a statutory *quid pro quo* is important when upholding a statute that abrogates common law rights against a due process attack. In any event, if such a *quid pro quo* is required, federal product liability legislation should provide the necessary exchange. In exchange for the loss of common law rights, the statute would provide a remedy under federal law, and the concomitant benefits of uniformity.

Of course, federal tort reform would be predicated upon federal power under the commerce clause. Studies have concluded that federal product liability legislation would be constitutional under the commerce clause, noting that little impact upon interstate commerce need be shown to justify federal action. Even local activity may be regulated "if it exerts a substantial economic effect on interstate commerce . . . irrespective of whether such effect is what might at some earlier time have been defined as 'direct' or 'indirect.'" It is unlikely that the revitalization of the tenth amendment by *National League of Cities v. Usery* will prove a barrier to legislation in such an inherently interstate area. For example, no serious challenge to the Magnuson-Moss Warranty Act has been mounted, and that legislation covers matters that would probably be dealt with in any federal product liability reform measure. The constitutional viability of FELA also indi-

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474. See, e.g., 4 LEGAL STUDY, supra note 14, at 82.
477. U.S. Const. art. I, § 8, cl. 3.
478. See 4 LEGAL STUDY, supra note 14, at 72.
480. The amendment provides that: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the States respectively, or to the people." U.S. Const. amend X.
482. See supra note 429.
483. Cf. *Taylor*, supra note 359, at 363 n.104. It should be noted that the fact that
cates that such reform would withstand substantial constitutional challenge.

Another objection to federal reform, which is now heard with less frequency than it once was, is that reform would require creation of yet another federal bureaucracy. This objection misconstrues the likely nature of federal reform. No administrative agency need be created, no rules or regulations promulgated, and no reports filed. As with the Jones Act and FELA, no federal bureaucracy is likely to arise to administer federal product liability reform. At most, Congress might form a small advisory body to make recommendations concerning further needed reform.

Of more weight is the objection to federal product liability reform based on its impact on the federal judiciary. Serious overcrowding of federal courts has been noted recently by Chief Justice Burger and others. If a federal reform law were passed that vested jurisdiction in the federal judiciary, the federal court workload would increase significantly. Such an objection, however, assumes that Congress would leave federal courts as they now exist, dumping thousands of cases on them with no adjustment in capacity. There are, however, ways to solve any possible overcrowding problem.

First, Congress could establish more judgeships, or create a separate product liability court, much like the tax court or bankruptcy court. This latter approach would probably achieve the maximum degree of uniformity. Congress could also abolish diversity jurisdiction, as has been proposed, to compensate for the increase in the product liability load. Alternatively, federal jurisdiction could be made concurrent with state jurisdiction, with federal actions limited by stringent jurisdictional amounts, or other restrictive requirements. Finally, jurisdiction could be

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federal legislation would pass constitutional muster does not mean that state courts could not find state legislation unconstitutional. As to state constitutional questions, state supreme courts are the final authority and they have been much more active in striking down economic legislation under state due process clauses. See generally E. Barrett, Constitutional Law: Cases and Materials 678-79 (1977).

484. See supra note 442 and accompanying text.
485. See supra notes 429-41 and accompanying text.
486. See supra notes 462-63 and accompanying text.
488. Congress has the power "to constitute tribunals inferior to the supreme court." U.S. Const. art. I, § 3, cl. 9.
placed with the states. Interpretational differences between states could then be resolved by the Supreme Court or, as has been recommended in a different context, by a national appellate court.\textsuperscript{491}

A final practical objection to federal tort reform is that, even if it is achieved, it will not provide desired uniformity. The focus of this objection is that the process of judicial interpretation would ultimately undermine the certainty provided by even federal reform legislation.\textsuperscript{492} The significance of this objection would seem to rest in the jurisdictional grants made by a new federal law. If Congress creates a product liability court, its centralized powers would enable it to eliminate considerable uncertainty in product liability law. On the other hand, if new legislation establishes concurrent jurisdiction between existing federal and state courts, there is greater room for uncertainties of interpretation to creep into uniform federal law. But even with concurrent jurisdiction, a federal law would still secure a much higher degree of certainty than the present system.

First, inherent uncertainties of the status quo would be eliminated, and, the vagaries of multiple courses of action would be resolved. A clear definition of "defect" would also greatly enhance the prospects for certainty, and confusing state reforms would be superceded. Second, because the need for federal legislation is premised on the need for certainty, careful and precise draftsmanship would carry a high congressional priority.\textsuperscript{493} Third, state courts could well give great deference to federal court interpretations. As Professor Gilmore has observed, commercial law achieved significant uniformity in the nineteenth century in the heyday of \textit{Swift v. Tyson},\textsuperscript{494} because state courts were more than willing to follow the "general" common law as announced by the federal courts.\textsuperscript{495} Fourth, Congress could vest \textit{appellate} jurisdiction over the state courts in the lower federal courts. Although this is a novel approach, it has been suggested as one way to achieve a greater degree of uniformity while leaving the bulk of litigation in state courts.\textsuperscript{496}

Of course, one of the main reasons that uncertainty of interpre-

\begin{itemize}
\item \textsuperscript{491} Chief Justice Burger recommends such a court for resolving conflicts at the federal circuit level. The Justice Department has endorsed the idea, and a Senate Judiciary Subcommittee has approved it. Werneil, \textit{Justices Seek Ways to Ease Big Case Load}, Wall St. J., July 8, 1983, at 23, col. 3.
\item \textsuperscript{492} See 4 \textit{LEGAL STUDY}, supra note 14, at 74.
\item \textsuperscript{493} Cf. Taylor, supra note 359, at 365.
\item \textsuperscript{494} 16 U.S. (3 Wheat) 1 (1842).
\item \textsuperscript{496} See Taylor, supra note 359, at 366.
\end{itemize}
tation permeates the UCC is that there is no final arbiter of inter-
pretation. Even under a concurrent jurisdiction approach to
product liability, however, if there is a uniform federal law the
Supreme Court would be available ultimately to resolve important
questions of statutory conflict. This would provide a much higher
level of uniformity than is presently possible.

V. CONCLUSION

This Article suggests strongly that federal reform provides the
best solution to important problems in the current product liability
system. Massive uncertainty in the substantive law of product lia-
bility has precipitated these problems. Almost any product related
suit can involve three different causes of action. In the field of
strict product liability, the states cannot agree upon a definition for
a “defective” product. New theories of liability, such as the Sindell
market share approach, develop rapidly, making it difficult for in-
surers to assess exposure to potential future liability. Most impor-
tantly, insurers and manufacturers perceive the uncertainty to be
even greater than it is.

The costs of the product liability problem are real. Although
insurance remains generally available, its costs have risen dramat-
ically, and partial unavailability problems are prevalent. Uncer-
tainty has also exacted a heavy psychological toll from
manufacturers and insurers. Product development and innovation
have been jeopardized. Product liability problems have even
threatened to drive large companies out of business, and the abil-
ity of some firms to respond to product liability judgments is im-
paired. The impact of the present product liability system on
consumer prices is difficult to measure. However, to the extent
that insurance costs are reflected in higher product prices, con-
sumers in conservative jurisdictions are being forced to pay for
remedies available only in more liberal jurisdictions.

Only federal reform can provide the certainty in product liabil-
ity law required by a national system of product manufacturing,
distribution, and sales. Present state reforms have actually in-
creased the level of uncertainty, and the Model Uniform Product
Liability Act has yet to be enacted in any jurisdiction. Moreover,
due to non-uniform amendments and differing court interpreta-
tions, the model uniform law approach is inherently flawed, and
could not achieve the certainty needed even if it were widely
adopted. Finally, the objections to federal reform cannot with-
stand close scrutiny. Even if federal reform vested jurisdiction

497. See supra notes 462-63 and accompanying text.
concurrently in the state and federal courts, it would achieve a degree of uniformity unattainable at the state level.

One theme that underlies this Article is that manufacturers and insurers perceive product liability problems to be even worse than they actually are. The product liability "grapevine," carrying its often patently false horror stories, exemplifies this phenomenon. Because product liability insurance decisions rely so heavily on the insurer's judgment, perception plays a pivotal role in assessing the effectiveness of any proposed solution to product liability problems. Federal reform would provide the best answer to problems of perception. Action at the federal level would send a strong signal to manufacturers and insurers that the government is serious about ending the uncertainty that permeates present product liability laws. Insurers could plan in a more stable environment, and actuarial determination of premium rates would be more feasible. In addition, insurers could rely more on statistical data, and less on the "grapevine," the "worst possible case," or their own predictions about future exposure to liability.

The most significant objection to federal reform seems to be a belief that it violates the principle of federalism: that federal reform would intrude upon states' rights. This objection ignores the inherently national character of our product liability system. Indeed, far from being the antithesis of federalism, federal product liability reform would exemplify one of federalism's most fundamental tenets: national problems warrant federal action.