insurers must participate and, in the case of proposals dealing with a broad class or the marginally insurable, through finer classification. To date, insurance has not been considered a fundamental right, although recently regulators have moved toward the creation of such a right by mandating that private carriers provide certain coverages to groups of people sharing characteristics making them poorer than average insurance risks. While in many situations the private insurers lack the experience necessary to permit them to price their product equitably for these groups, that experience will eventually be acquired. It is another matter entirely to tie to availability a requirement that valid statistical risks be ignored in making products available.

PRODUCTS RELIABILITY—A REASONABLE EXPECTATION—THE ULTIMATE GOAL

Sol Kroll†

I. INTRODUCTION

The last decade of products liability judicial expression affords industry, both domestic and international, an opportunity and the incentive to design and manufacture products which are safe and reliable. That result is a just and reasonable expectation of users and purchasers, and is tacitly held out by industry as the ultimate goal. The expansion of products liability should and must be considered in positive terms of fostering product reliability.

It is clear that products liability awards, in terms of frequency and amount granted per claim, are significantly increasing, thus requiring the products liability insurer to increase exposure. It is equally clear that such an increase in insurance premiums should have the effect of making it economically worthwhile for industry to spend those sums required in planning, design and manufacture, so as to ultimately design safe products with a view toward reducing the cost of products liability insurance in the future.

This article will demonstrate that the position of injured plaintiffs in products liability litigation can best be met by meeting the challenge of products liability litigation. In this respect, technological developments have advanced sufficiently so as to permit, in most cases, the development of safe products, designed with appropriate protective devices and manufactured in such a manner as to meet the reliability standards expected by consumers. It is suggested that the application of cost-benefit analysis to products design and manufacture will yield ultimate economic benefit to manufacturers, as well as permit such manufacturers to meet their expected social responsibilities.

Though this article generally relates to the development of reliable products as a solution to the products liability expansion, it is worth noting that the worldwide insurance markets have been confronted with an asserted inability to provide sufficient insurance to meet the requirements of industry for their protection as against exposure to damages. Thus, contemporary judicial thinking that concepts of liability can and should be easily expanded since insurers, as institutions of "risk-spreading" will ultimately bear the losses, may be based on an invalid assumption. Insurers, writing products liability insurance policies which indemnify insureds based upon when an "occurrence" develops, have found themselves incapable of determining potential risks and jury awards deriving from "occurrences" years, even decades, following the manufacture of a product. Numerous such occurrences are not reported to insurers until

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many years after the alleged occurrence, thus rendering the underwriting assumptions invalid.

The insurance industry is presently examining "claims made" insurance as a viable alternative to those forms of insurance written on an "occurrence" basis. The "claims made" policies afford protection for those events with respect to which a claim is made during the period of the policy, and generally without reference to the date of an occurrence. In such a form of insurance, the subscribing insurers become immediately aware of the nature and potential of the risk which they have undertaken, are better able to determine potential jury awards with respect to such claims and, therefore, are in a position to adjust their premium schedules in accordance with a risk understood, rather than a risk with respect to which their underwriting information is or may be based on wholly inaccurate underwriting assumptions.

II. Historical Background

The law of products liability, civil or criminal, extends at least 700 years into the past. Criminal penalties existed for those who sold impure food or drink at least as far back as 1266.[1]

The civil law of products liability did not, however, begin in earnest until *MacPherson v. Buick Motor Co.*,[2] decided in 1916. In that decision, the Court of Appeals of New York, its highest tribunal, declared that the "privity" doctrine would not be applicable in cases wherein an alleged manufacturing defect brought about a condition which rendered the product unsafe for use by the intended consumer.[3]

Thereafter, until the mid-1950's, the law of products liability remained relatively stable. During the past twenty years, however, there has been a virtual explosion in the concepts of products liability and the bases on which liability against a manufacturer or a distributor of a product may be grounded.[4]

This expansion of judicial thinking, in combination with legislation promulgating uniform standards for products,[5] has created a situation wherein manufacturers are today subjected to litigation in various forms of action requiring substantially lower burdens of proof than ever before. The result has been a proliferation of the number of claims and suits filed, which, when combined with the general increase in awards by juries in favor of plaintiffs,

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States Supreme Court Bars. Member of the Insurance and Casualty Committee of the American Bar Association, the International Bar Association Committee on Insurance, the Defense Research Institute Product Liability Committee, the Insurance Law Committee of the Association of the Bar of the City of New York, and the Insurance and Casualty Committee of the New York State Bar Association.—Ed.

1. Restatement (Second) of Torts § 402A, comment *b* at 348 (1965) [hereinafter cited as Restatement].
2. 217 N.Y. 382, 111 N.E. 1050 (1916).
3. MacPherson v. Buick Motor Co., 217 N.Y. 382, 393, 111 N.E. 1050, 1053 (1916).
4. *See* section III *infra*.
5. Legislation promulgating minimum standards for products provides a ready basis for a claim that deviation from these standards is a sufficient basis for manufacturer liability. *See, e.g.*, 15 U.S.C. §§ 1191-1204 (1970); *id.* §§ 1261-74 (1970 & Supp. V 1975); *id.* §§ 1471-76; *id.* §§ 2051-81 (Supp. V 1975).

has lead inexorably to the increased exposure of manufacturers and their products liability insurers.[6]

III. The Expansion of Products Liability During the Recent Past

The expansion of products liability litigation has been fostered by the availability of various forms of action and by lower proof requirements than were traditionally required. These developments are the result of both judicial decisions and legislation. A brief review will demonstrate the significance of these changes.

A. *Strict Liability*

Whereas the common law formerly permitted an injured party to claim against a manufacturer only in actions based on breach of warranty and negligence, the concept of "strict liability" has met judicial approval in the United States within the recent past.

In *Greenman v. Yuba Power Products, Inc.*,[7] the Supreme Court of California held the manufacturer of power tools strictly liable in tort for the placing of a product into the market with knowledge that it would not be properly inspected for defects before use. Since that decision in 1962, virtually all of the major industrial states have adopted the concept of strict liability, though the interpretations of various courts as to what constitutes this doctrine is somewhat at variance.[8]

Many of the courts which have adopted the doctrine have expressly accepted section 402A of the *Restatement (Second) of Torts*, which has provided, since 1965, as follows:

> (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.

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6. *See* section IV *infra*.
7. 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1962).
8. *See, e.g.*, Hawkeye-Security Ins. Co. v. Ford Motor Co., 174 N.W.2d 672, 684 (Iowa 1970); Piercefield v. Remington Arms Co., 375 Mich. 85, 133 N.W.2d 129 (1965); Kerr v. Corning Glass Works, 284 Minn. 115, 169 N.W.2d 587 (1969); Codling v. Paglia, 32 N.Y.2d 330, 298 N.E.2d 622, 345 N.Y.S.2d 461 (1973); Velez v. Craine & Clark Lbr. Corp., 33 N.Y.2d 117, 305 N.E.2d 750, 350 N.Y.S.2d 617 (1973); Webb v. Zern, 422 Pa. 424, 220 A.2d 853 (1966); *cf.* Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 69 (1960).

However, the last major industrial state to adopt the concept of strict liability, New York, did so in *Codling v. Paglia*[9] and *Velez v. Craine & Clark Lumber Corp.*[10] but fashioned requirements different from the *Restatement*. As expressly stated by the Court of Appeals of New York in *Codling*, the requirements of "strict liability" in that jurisdiction are as follows:

> [T]he manufacturer of a defective product is liable to any person injured or damaged if the defect was a substantial factor in bringing about his injury or damages; provided: (1) that at the time of the occurrence the product is being used (whether by the person injured or damaged or by a third person) for the purpose and in the manner normally intended, (2) that if the person injured or damaged is himself the user of the product he would not by the exercise of reasonable care have both discovered the defect and perceived its danger, and (3) that by exercise of reasonable care the person injured or damaged would not otherwise have averted his injury or damages.[11]

The New York position differs in that it allows contributory negligence as a defense. Under the *Restatement* view, contributory negligence, as distinguished from assumption of the risk, is usually not sufficient to bar recovery.[12]

The essential concept of "strict liability" is of course the placing into the marketplace of a product which is "defective."[13] This element is required both by the *Restatement* and by those courts which have not fully adopted the *Restatement* position.

Given that judicial decisions have held that some questions of defectiveness, such as the adequacy of warnings and proper labeling as to dangers, are questions of fact, the increased exposure to liability is self-evident. For example, in *Gonzales v. Virginia-Carolina Chemical Co.*,[14] a federal district court, sitting without a jury, held that a label placed on a product by the manufacturer which warned the user to avoid contact with the contents of the container *or* inhalation of the contents was an insufficient warning as to the danger of inhalation *and* skin contact.

B. *Breach of Warranty Actions*

Traditionally, the right of a consumer to sue a manufacturer for breach of warranty was limited by the "privity" rule accepted by the courts following the *Winterbottom v. Wright*[15] decision in 1842. This doctrine was first eroded, in

9. 32 N.Y.2d 330, 298 N.E.2d 622, 345 N.Y.S.2d 461 (1973).
10. 33 N.Y.2d 117, 305 N.E.2d 750, 350 N.Y.S.2d 617 (1973).
11. Codling v. Paglia, 32 N.Y.2d 330, 342, 298 N.E.2d 622, 628-29, 345 N.Y.S.2d 461, 469-70 (1973). Most recently, in the case of *Micallef v. Miehle Co.*, a majority of the Court of Appeals of New York again declined to expressly adopt section 402A of the *Restatement*, precipitating the comment in the opinion that two of the justices would have preferred to adopt the position embodied in that section. Micallef v. Miehle Co., 39 N.Y.2d 376, 348 N.E.2d 571, 384 N.Y.S.2d 115 (1976).
12. *See generally* Carmichael, *Strict Liability in Tort—An Explosion in Products Liability Law*, 20 DRAKE L. REV. 528 (1971) [hereinafter cited as Carmichael]; Noel, *Defective Products: Abnormal Use, Contributory Negligence, and Assumption of Risk*, 25 VAND. L. REV. 93 (1972).
13. *See, e.g.*, RESTATEMENT, *supra* note 1, comments *g-i* at 351-53.
14. 239 F. Supp. 567 (E.D.S.C. 1965).
15. 152 Eng. Rep. 402 (1842).

part, by *MacPherson*. Thereafter, numerous judicial decisions substantially eliminated any requirement for privity as against the manufacturer of a product,[16] with the retention of the privity doctrine in certain instances so as to preclude an action by a consumer against the manufacturer of a component part.[17]

At the same time, the adoption of the *Uniform Commercial Code* resulted in the further elimination of any privity requirements with respect to breach of warranty actions, pursuant to section 2-314, which provides:

> (1) Unless excluded or modified (§ 2-316), a warranty that the goods shall be merchantable is implied in a contract for their sale if the seller is a merchant with respect to goods of that kind. Under this section the serving for value of food or drink to be consumed either on the premises or elsewhere is a sale.
> (2) Goods to be merchantable must be at least such as
> (a) pass without objection in the trade under the contract description; and
> (b) in the case of fungible goods, are of fair average quality within the description; and
> (c) are fit for the ordinary purposes for which such goods are used; and
> (d) run, within the variations permitted by the agreement, of even kind, quality and quantity within each unit and among all units involved; and
> (e) conform to the promises or affirmations of fact made on the container or label if any.
> (3) Unless excluded or modified (§ 2-316) other implied warranties may arise from course of dealing or usage of trade.

Though judicial decisions with respect to this section are not uniform in holding that privity is not required, "[t]he modern trend is away from privity to foreseeability as the criterion for liability."[18]

Apart from the elimination of the privity requirement, judicial decisions have, as well, virtually eliminated the "patent defect" rule, upon which manufacturers could rely in defense of certain claims.[19] Simply stated, the "patent defect" rule holds that a manufacturer in a breach of warranty action cannot be held liable for a defect which is "patent" or "open and obvious."[20] In certain jurisdictions, such rule also applied to strict liability actions.[21]

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16. *See, e.g.*, Langford v. Chrysler Motors Corp., 373 F. Supp. 1251 (E.D.N.Y. 1974), *aff'd*, 513 F.2d 1121 (2d Cir. 1975); Grant v. Nat'l Acme Co., 351 F. Supp. 972 (W.D. Mich. 1972); Klein v. Asgrow Seed Co., 246 Cal. App. 2d 87, 54 Cal. Rptr. 609 (Dist. Ct. 1966); State Farm Mut. Ins. Co. v. Anderson-Weber, Inc., 252 Iowa 1289, 110 N.W.2d 449 (1961); State *ex rel.* W. Seed Prod. Corp. v. Campbell, 250 Ore. 262, 442 P.2d 215 (1968), *cert. denied*, 393 U.S. 1093 (1969).

17. *See* Goldberg v. Kollsman Instr. Corp., 12 N.Y.2d 432, 191 N.E.2d 81, 240 N.Y.S. 2d 592 (1963).

18. T. ANDERSON, UNIFORM COMMERCIAL CODE § 2-314:47, at 571 (1975).

19. *See, e.g.*, Dorsey v. Yoder Co., 331 F. Supp. 753 (E.D. Pa. 1971), *aff'd mem.*, 474 F.2d 1339 (3d Cir. 1973); Pike v. Frank G. Hough Co., 2 Cal. 3d 465, 467 P.2d 229, 85 Cal. Rptr. 629 (1970); Casey v. Gifford Wood Co., 61 Mich. App. 208, 232 N.W. 2d 360 (1975); Micallef v. Miehle Co., 39 N.Y.2d 376, 348 N.E.2d 571, 384 N.Y.S.2d 115 (1976).

20. *See, e.g.*, Campo v. Scofield, 301 N.Y. 468, 95 N.E.2d 802 (1950).

21. *See, e.g.*, Meyer v. Gehl Co., 36 N.Y.2d 760, 329 N.E.2d 666, 368 N.Y.S.2d 834

The leading authority in support of the patent defect ruling was *Campo v. Scofield*,[22] decided in 1950 by the Court of Appeals of New York. In that case, a cause of action grounded in breach of warranty was rejected for lack of privity.[23] Although it was the negligence action which was dismissed for failure of the injured party to assert that the alleged defect was latent, the broad dictum of the court was generally accepted as requiring the pleading and proving of a latent defect in all products liability actions in New York.[24]

Campo initially received judicial approval in other jurisdictions[25] but failed to receive universal acceptance.[26] In *DiMeo v. Minster Machine Co.*,[27] the Second Circuit, interpreting Connecticut law, affirmed a judgment for the injured plaintiff where the product was obviously dangerous. Other courts have expressly rejected the *Campo* doctrine.[28] Among these, the Supreme Court of California, in *Pike v. Frank G. Hough Co.*,[29] rejected an argument submitted by the manufacturer that the particular danger of its product was patent and could have been rectified by the installation of minor additional parts following sale.

It presently appears that the "patent defect" doctrine will be fully repudiated, given that New York has recently rejected the same, overruling *Campo* in *Micallef v. Miehle Co.*[30] The reasoning of the court in *Micallef* was clearly stated:

> Apace with advanced technology, a relaxation of the *Campo* stringency is advisable. A casting of increased responsibility upon the manufacturer, who stands in a superior position to recognize and cure defects, for improper conduct in the placement of finished products into the channels of commerce furthers the public interest. To this end, we hold that a manufacturer is obligated to exercise that degree of care in his plan or design so as to avoid any unreasonable risk of harm to anyone who is likely to be exposed to the danger when the product is used in the manner for which the product was intended as well as an unintended yet reasonably foreseeable use.[31]

It may fairly be stated that the elimination of the privity requirement in combination with the rejection of the patent defect rule has opened significant means by which an injured person may make a direct claim against the

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(1975). *See generally* Marschall, *An Obvious Wrong Does Not Make a Right: Manufacturers' Liability For Patently Dangerous Products*, 48 N.Y.U.L. REV. 1065, 1077 (1973) [hereinafter cited as Marschall]; Noel, *Manufacturer's Negligence of Design or Directions For Use of a Product*, 71 YALE L.J. 816, 818 (1962).

22. 301 N.Y. 468, 95 N.E.2d 802 (1950).
23. Campo v. Scofield, 301 N.Y. 468, 471, 95 N.E.2d 802, 803 (1950).
24. *Id.* at 472, 95 N.E.2d at 803-04.
25. *See, e.g.*, Blunk v. Allis-Chalmers Mfg. Co., 143 Ind. App. 631, 242 N.E.2d 122 (1968); Albert v. J. & L. Eng'r Co., 214 So. 2d 212 (La. Ct. App. 1968); Blakenship v. Morrison Mach. Co., 225 Md. 241, 257 A.2d 430 (1969); Fisher v. Johnson Milk Co., 383 Mich. 158, 174 N.W.2d 752 (1970).
26. *See* cases cited note 19 *supra*.
27. 388 F.2d 18 (2d Cir. 1968).
28. *See* cases cited note 19 *supra*.
29. 2 Cal. 3d 465, 467 P.2d 229, 85 Cal. Rptr. 629 (1970).
30. 39 N.Y.2d 376, 348 N.E.2d 571, 384 N.Y.S.2d 115 (1976).
31. Micallef v. Miehle Co., 39 N.Y.2d 376, 383, 348 N.E.2d 571, 577, 384 N.Y.S.2d 115, 121 (1976) (citations omitted).

manufacturer of a product not fit for the use intended or not of merchantable quality. Given that the liability of a manufacturer may be based on patent defects as well as latent defects, and given that the question of what is a "defect" is to be determined by the trier of fact, the expansion of products liability exposure is clear and unequivocable.

C. *Negligence*

The general concept of negligence cases has not, itself, undergone substantial modification during the past several years. It remains the burden of a plaintiff to prove (a) duty, (b) breach of a duty, (c) injury, and (d) that the alleged breach was the proximate cause of the injury.[32]

One essential element of the pleading and proving of a negligence action has been somewhat modified in various jurisdictions by the elimination of the contributory negligence rule and its supplanting by the comparative negligence rule.[33] This modification has the effect of permitting injured persons whose conduct contributed to the injury to prevail, though in a reduced amount as respects the award.[34] Here, again, New York has been among the last of the major industrial states to eliminate the contributory negligence rule. It did so in 1975.[35]

There has been, however, a trend in judicial thinking toward permitting various claims to be determined by triers of fact on standards somewhat different than previously. Whereas courts did hold that the "reasonable man standard" was subject to the practices and procedures in a given industry,[36] more recent cases have rejected that concept.[37] The *Restatement (Second) of Torts* section 295A provides that "[i]n determining whether conduct is negligent, the customs of the community, or of others under like circumstances, are factors to be taken into account, but are not controlling where a reasonable man would not follow them."

With reference to the relevance of industry standards, comment *c* in pertinent part states:

> No group of individuals and no industry or trade can be permitted, by adopting careless and slipshod methods to save time, effort, or

32. W. PROSSER, LAW OF TORTS § 30, at 266 (4th ed. 1971) [hereinafter cited as PROSSER].

33. *See, e.g.*, MINN. STAT. ANN. § 604.01 (Supp. 1976); NEB. REV. STAT. § 25-1151 (1965); WIS. STAT. ANN. § 895.045 (1966). *But see* O'Keefe v. Chicago, R.I. & Pac. R.R., 32 Iowa 467 (1871).

34. PROSSER, *supra* note 32, at 433-39.

35. *See* N.Y.C.P.L.R. §§ 1411-13 (McKinney Supp. 1975).

36. *See, e.g.*, Ciociola v. Delaware Coca-Cola Bottling Co., 53 Del. 477, 172 A.2d 252 (1961); *cf.* Loebig's Guardian v. Coca-Cola Bottling Co., 259 Ky. 124, 81 S.W.2d 910 (1935); Post v. Manitowoc Eng'r Corp., 88 N.J. Super. 199, 211 A.2d 386 (Super. Ct. App. Div. 1965). *But see* C.D. Herme, Inc. v. R.C. Tway Co., 294 S.W.2d 534 (Ky. 1956).

37. *See, e.g.*, Griggs v. Firestone Tire & Rubber Co., 513 F.2d 851 (8th Cir. 1972), *cert. denied*, 423 U.S. 865 (1975); Blohm v. Cardwell Mfg. Co., 380 F.2d 341 (10th Cir. 1967); Sheward v. Virtue, 20 Cal. 2d 410, 126 P.2d 345 (1942); Evershine Prod., Inc. v. Schmitt, 130 Ga. App. 34, 202 S.E.2d 228 (1973); Wensell v. MTD Prod., Inc., 32 Ill. App. 3d 279, 336 N.E.2d 125 (1975); Gelsumino v. E.W. Bliss Co., 10 Ill. App. 3d 604, 295 N.E.2d 110 (1973); Alfieri v. Cabot Corp., 17 App. Div. 2d 455, 235 N.Y.S.2d 753 (App. Div. 1962), *aff'd mem.*, 13 N.Y.2d 1027, 195 N.E.2d 310, 245 N.Y.S.2d 600 (1963); Marsh

> money, to set its own uncontrolled standard at the expense of the rest of the community. If the only test is to be what has always been done, no one will ever have any great incentive to make any progress in the direction of safety. It follows, therefore, that whenever the particular circumstances, the risk, or other elements in the case are such that a reasonable man would not conform to the custom, the actor may be found negligent in conforming to it; and whenever a reasonable man would depart from the custom, the actor may be found not to be negligent in so departing.[38]

Significant numbers of decisions appear to indicate that the position adopted by the *Restatement* section 295A is being accepted in all or in part.[39] Thus, the defense formerly asserted by the manufacturer as to compliance with industry standards would appear to be no longer viable, for triers of fact may now entirely reject a standard determined to be inappropriate under the circumstances.

D. *Broader Discovery*

The Federal Rules of Civil Procedure have greatly expanded devices of discovery.[40] Several jurisdictions have adopted them in substantial part, while others have become more liberal in the construction of their own statutes.[41]

Under the federal rules, substantial discovery is now permitted of investigations conducted by manufacturers with respect to their products following an occurrence if not expressly prepared for litigation purposes.[42] Similarly, exchange of information is mandated with regard to expert opinions.[43] Moreover, counsel, aware of the broader discovery procedures available, have learned to avail themselves of such procedures and now seek discovery far beyond that generally contemplated several decades ago. Today, it is not uncommon for counsel representing the injured party to serve, with a complaint, extensive interrogatories inquiring not only as respects the particular product which caused the injury, but also with respect to the entire design, planning, manufacturing, quality control and inspection procedures adopted by the manufacturer. In addition, information is often sought of any history of prior claims, notices received by the manufacturer as respects complaints with regard to the product line, and the steps, if any, taken by the manufacturer in response to each such complaint.

The effect of such broad discovery is to cause the manufacturer to reveal virtually every aspect of the manner in which its product came to be placed in the marketplace. The manufacturer's actions in this regard are then subject to the hindsight of the ultimate trier of fact with respect to what should have been done, such hindsight often taking place twenty years or more following the actual manufacture of the product.

Wood Prod. Co. v. Babcock & Wilcox Co., 207 Wis. 209, 240 N.W. 392 (1932); *cf.* Day v. Barber-Colman Co., 10 Ill. App. 2d 494, 135 N.E.2d 231 (1956).

38. RESTATEMENT, *supra* note 1, § 295A, comment *c* at 61.
39. *See* cases cited note 37 *supra*.
40. FED. R. CIV. P. 26-37; *see* Hickman v. Taylor, 329 U.S. 495 (1947).
41. *See, e.g.*, M. GREEN, BASIC CIVIL PROCEDURE 122 (1972).
42. FED. R. CIV. P. 26(b); *accord*, IOWA R. CIV. P. 122(1).
43. FED. R. CIV. P. 26(b)(4); *accord*, IOWA R. CIV. P. 122(4).

E. *Evidence*

Evidentiary requirements have also been subjected to a lessening of standards with respect to the questions of evidence to meet a burden of proof. It is generally accepted that the Federal Rules of Evidence are significantly broader than the evidentiary requirements of many jurisdictions. For example, Federal Rule of Evidence 803(18) broadens the use of learned treatises in certain situations by allowing their introduction *as evidence* by a party as part of his case in chief, or even by judicial notice.[44] A much narrower view concerning the admissibility of learned treatises is followed by some state jurisdictions where such treatises may be used only for impeachment purposes of expert witnesses on cross-examination and then only in certain situations; in any case, the treatises themselves are not admissible.[45] A similar example is Federal Rule of Evidence 804(b)(2) which broadens the admissibility of dying declarations.[46]

Additionally, courts have recently permitted products liability cases to be presented to juries on the question of a "defect" without the necessity of an expert witness.[47] Such decisions, though not extensive, constitute significant departure from traditional proof requirements in such cases.[48]

IV. Economic Results of Products Liability Expansion

A. *The Business Environment*

In order to place the existing products liability problem in a better perspective, the Department of Commerce recently conducted a thirty-day study to develop an accurate data base.[49] Althought noting the lack of currently

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44. Federal Rule of Evidence 803(18) allows these as an exception to the hearsay rule:
> [T]o the extent called to the attention of an expert witness upon cross-examination, statements contained in published treatises, periodicals, or pamphlets on a subject of history, medicine, or other science or art, established as a reliable authority by the testimony or admission of the witness or by other expert testimony or by judicial notice. If admitted the statements may be read into evidence but may not be received as exhibits.

This rule has been cited with approval and followed in two recent federal district court cases. Apicella v. McNeil Laboratories, 66 F.R.D. 78 (E.D.N.Y. 1975); Generella v. Weinberger, 388 F. Supp. 1086 (E.D. Pa. 1974).

45. *See, e.g.*, Howell v. Outer Drive Hosp., 238 N.W.2d 553 (Mich. App. 1975); Webb v. Jorns, 530 S.W.2d 847 (Tex. Civ. App. 1975).

46. Federal Rule of Evidence 804(b)(2) allows the admissibility, "[i]n a prosecution for homicide or *in a civil action or proceeding* [of] a statement made by a defendant while believing that his death was imminent, concerning the cause or circumstances of what he believed to be his impending death [emphasis added]." A narrower view followed in some jurisdictions limits the admissibility of dying declarations to criminal cases only. *See, e.g.*, Castle v. State, 305 So. 2d 794 (Fla. App. 1974); People v. Coniglio, 79 Misc. 2d 808, 361 N.Y.S.2d 524 (Sup. Ct. 1974).

47. *See, e.g.*, Daleiden v. Carborundun Co., 438 F.2d 1017, 1022 (8th Cir. 1971); Crusan v. Aluminum Co., 250 F. Supp. 863 (E.D. Tex. 1975); Greco v. Bucciconi, 283 F. Supp. 978 (W.D. Pa. 1967). *But cf.* Beetler v. Sales Affiliates, Inc., 431 F.2d 651 (7th Cir. 1970).

48. *See* Carmichael, *supra* note 12, at 546.

49. Bureau of Domestic Commerce, U.S. Dep't of Commerce, Product Liability: Assessment of Related Problems and Issues 1 (1976) [hereinafter cited as Dep't of Commerce Study].

The tripartite objectives of this examination were to:

available, validated statistics upon which to accurately portray the industry picture,[50] it did formulate an overall conclusion that "the frequency and severity of product liability claims appear to be increasing significantly."[51] Therefore, bearing in mind its nature, the following review should nevertheless be enlightening.

In the United States, there are an estimated 10,000 different kinds of products[52] produced in 360,000 manufacturing plants,[53] and sold in 2,300,000 retail establishments.[54] Product related accidents cost the economy $5.5 billion annually,[55] resulting from 5.9 million injuries at work[56] and 20 million at home (in which 110,000 persons are permanently disabled and 30,000 die).[57] To compound this unfortunate state of affairs, it has also been alleged that the majority of injuries are not compensated for, as insurance in this area only covers part of the related medical costs.[58]

As a natural outgrowth of this state of affairs (increased frequency and severity of claims combined with inadequate compensation), the cases decided in favor of the plaintiff rose from 40% to 52%[59] and the average award increased from approximately $12,000 to $80,000[60] during the period from 1965 to 1973. Additionally, the amount of awards rose from $500,000 in 1965,[61] to

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1. Define the scope and nature of the product liability insurance problem in the workplace and the marketplace.
2. To the extent possible determine the causes and effects of the product liability problem for manufacturers, emphasizing the impact on small business.
3. Aggregate and analyze all available data to identify trends and implications and review potential remedies.

Id.

50. *Id.* at 4-5, 38-43.

51. *Id.* at 8. *See also id.* at 50. Therefore, notwithstanding the numerous proposed remedies cited, the Department refused to evaluate any of them until further research was performed. *Id.* at 16. Towards this end, a fifteen-month comprehensive study of this problem was proposed, and it is now close to the time for the appointment of such an "advisory task force." *See* BUS. INS., May 3, 1976, at 3; Friday Flash, Nat'l Ass'n of Ins. Brokers, April 16, 1976, at 1 (remarks of S. Sherwin, Deputy Assistant Secretary for Domestic Commerce).

52. Daenzer, *Market Availability of Products Liability*, THE WEEKLY UNDERWRITERS, Jan. 24, 1976, at 10 [hereinafter cited as Daenzer].

53. DEP'T OF COMMERCE STUDY, *supra* note 49, at 7. Daenzer, *supra* note 52 states the figure as 200,000.

54. DEP'T OF COMMERCE STUDY, *supra* note 49, at 7. Daenzer, *supra* note 52 states the figure as 2,000,000.

55. DEP'T OF COMMERCE STUDY, *supra* note 49, at 6; Barile, *No-Fault Products Liability Insurance*, INT'L INS. MONITOR, March 1975, at 24 [hereinafter cited as Barile].

56. DEP'T OF COMMERCE STUDY, *supra* note 49, at 6.

57. *Id. See also* Barile, *supra* note 55. Moreover, approximately seven million people are estimated to have received injuries from consumer products during the period of July 1, 1974, to June 30, 1975, which were sufficiently serious to require emergency room treatment. UNITED STATES CONSUMER PROD. SAFETY COMM'N, ANNUAL REPORT FOR FISCAL 1975, app. E, at 75-79.

58. Barile, *supra* note 55.

59. MODERN PACKAGING, Oct. 1975, at 10 [hereinafter cited as MODERN PACKAGING]. The earlier figure has been placed at 49% by *Business Insurance*, June 30, 1975, at 27 [hereinafter cited as BUS. INS.].

60. MODERN PACKAGING, *supra* note 59; BUS. INS., *supra* note 59. *See also* Orr, *Quality Control and Products Liability: Safe Product—Best Defense*, CAN. RISK MANAGEMENT & BUS. INS., Nov.-Dec. 1975, at 10 [hereinafter cited as Orr]; DEP'T OF COMMERCE STUDY, *supra* note 49, at 8. This was an increase of 686% in eight years, as compared with only a 60% increase in the general price index. *Id.*

61. MODERN PACKAGING, *supra* note 59.

$12.5 billion in 1972[62] to $50 billion in 1975.[63] However, estimates of the number of these claims which resulted in lawsuits being filed vary drastically, even within the insurance industry itself.[64] Some of these estimates for the years 1968-1975 are:

Year	*Number of Lawsuits Filed*
1968	100,000[65]
1969	300,000[66]
1970	500,000[67]
1971	500,000[68]
1972	500,000[69]
1973	over 500,000[70]
1974	600,000[71]
1975	1,000,000[72]

These statistics demonstrate the apparently increased public awareness as to the existence of products liability insurance.[73] This transformation from caveat emptor to caveat vendor has compelled many companies to obtain products liability insurance. For example, a survey by the American Management Association revealed that out of the 392 responding firms, 292 carried products liability insurance for both bodily injury and property damage, while 334 had at least bodily injury insurance.

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62. A.T. Kearney, Inc., Managing in a Consumer Economy: A Research Study on Product Quality and Safety, 1975, at 4, *reported in* BUS. INS., Sept. 22, 1975, at 75 [hereinafter cited as Kearney Report].

63. *Id. See also* NAT'L UNDERWRITER (prop. & cas. ed.), Feb. 14, 1975, at 29.

64. Prior to 1968, figures had varied even more drastically as to the number of lawsuits filed. That most often cited for 1960 was 35,000. *See, e.g.*, Barrett, *The Products Situation in the United States Today*, INS. BROKER, Jan. 1974, at 7 [hereinafter cited as Barrett]; BUS. WEEK, March 9, 1974, at 55 [hereinafter cited as BUS. WEEK]; INS. ADVOCATE, Oct. 4, 1975, at 26 [hereinafter cited as INS. ADV.] (remarks of T. Lawrence Jones, President, Am. Ins. Ass'n). Others have estimated the number as under 50,000 (Elec. News, Mar. 10, 1975, at 38, col. 13 (remarks of attorney G.W. Farquhar) [hereinafter cited as Elec. News]) and as 50,000 (Ins. Information Institute Newsletter, Oct. 11, 1975, at 1 [hereinafter cited as Newsletter]). There were an estimated 50,000 lawsuits in 1963 (Orr, *supra* note 60), 55,000 in 1965 (Elec. News, *supra* note 64) and 100,000 in 1966 (NAT'L UNDERWRITER (prop. & cas. ed.), Mar. 9, 1976, at 16) [hereinafter cited as NAT'L UNDERWRITER].

65. *See* Barrett, *supra* note 64; NAT'L UNDERWRITER (prop. & cas. ed.), May 25, 1973, at 40 (remarks of attorney M.E. Marks).

66. *See* Orr, *supra* note 60.

67. *See* INS. ADV., *supra* note 64; Newsletter, *supra* note 64.

68. *See* NAT'L UNDERWRITER, *supra* note 65.

69. *See* Elec. News, *supra* note 64; Barrett, *supra* note 64; *cf.* INS. ADVOCATE, May 13, 1972, at 25 (remarks of A. Spiefelman, Vice-President, Am. Ins. Ass'n).

70. *See* BUS. WEEK, *supra* note 64.

71. *See* BUS. INS., *supra* note 59; BUS. WEEK, *supra* note 64.

72. *See* Barile, *supra* note 55; Elec. News, *supra* note 64; Newsletter, *supra* note 64; MODERN PACKAGING, *supra* note 59; NAT'L UNDERWRITER, *supra* note 64; NAT'L UNDERWRITER (prop. & cas. ed.), Feb. 13, 1976, at 1; *id.*, Nov. 9, 1973, at 28 (remarks of R.E. Cartwright, Am. Trial Lawyers Ass'n).

Note that even though this figure has not been validated, it could nonetheless be correct. DEP'T OF COMMERCE STUDY, *supra* note 49, at 39.

73. *See* Speech by L.E. Stephens, Vice-President of State Auto. Mut. Ins. Co., Columbus, 20th Annual Workshop of Nat'l Ass'n of Independent Insurers, in 1974 INS. L.J. 206 [hereinafter cited as Stephens Speech].

This trend has therefore engendered the logically sequential stage of caveat "insurer."[74] Due to this, it would indeed be naive to assert that products liability insurance is readily available whenever it is desired.[75] The cost of the ever increasing determinations of corporate liability must be compensated for in some manner. If only to remain financially sound, insurers are taking a number of steps to protect themselves in this area. These measures include restricting offered coverage through additional exclusions,[76] utilizing large deductible limits,[77] increasing rates either generally[78] or through the placement of certain companies in assigned risk categories,[79] including more stringent cancellation clauses,[80] or using some other practical means.[81] Considering this, it appears anomalous for many state insurance departments to admit the possibility of an impending products liability insurance crisis, without acknowledging that one presently exists.[82]

Products liability insurance premiums are established in two different ways: approximately 75% of all policies are "A" rated by the Insurance Service Office, a national rate making organization; the remaining 25% are determined by a manual rate.[83] As the level of incurred losses on miscellaneous liability insurance policies more than doubled between 1967 and 1973,[84] the premiums themselves increased 65%.[85] This increase may be partially attributed to the existence of inherent inflationary factors in the 1974 rates, which were designed to offset prior inadequate ones.[86] The Insurance Service Office proposed an increase in manual rates of 50% for bodily injury and 15% for property damage insurance in 1975, and these changes have been approved in many states.[87]

The following chart illustrates the specific increases in the cost of products liability insurance:

Year	*Amount of Premiums*
1960	$ 45 million[88]

74. *See* NAT'L UNDERWRITER (prop. & cas. ed.), Oct. 3, 1975, at 1 (remarks of T. Lawrence Jones, President, Am. Ins. Ass'n).

75. *See, e.g.*, the case of Havir Manufacturing Co., discussed in the text accompanying notes 109-12 *infra*.

76. *See, e.g.*, NAT'L UNDERWRITER, *supra* note 64; G. PETERS, PRODUCT LIABILITY AND SAFETY 136 (1971) [hereinafter cited as PETERS].

77. PETERS, *supra* note 76. *See also* NAT'L UNDERWRITER, *supra* note 64.

78. NAT'L UNDERWRITER, *supra* note 64, at 1.

79. PETERS, *supra* note 76, at 3, 136; *cf. id.*, at 145-46.

80. NAT'L UNDERWRITER, *supra* note 64, at 1; PETERS, *supra* note 76, at 136.

81. *See generally* DEP'T OF COMMERCE STUDY, *supra* note 49, at 55.

82. NAT'L UNDERWRITER, *supra* note 64.

83. DEP'T OF COMMERCE STUDY, *supra* note 49, at 32.

84. [T]he general class of insurance, miscellaneous liability insurance, of which product liability is a part, provides a clear case of the problems encountered by the insurance companies in this field. Product liability is a major segment of miscellaneous liability (40%). While its specific ratios may vary somewhat from the aggregates, the trends for product liability are expected to be somewhat similar.

Id. at 42.

85. *Id.* at 40. Industry had claimed a 5000% increase over the past seven years for some firms. *See, e.g.*, BUS. INS., Oct. 20, 1975, at 2; NAT'L UNDERWRITER, *supra* note 64.

86. NAT'L UNDERWRITER, *supra* note 64. *See also* BUS. INS., Apr. 7, 1975, at 3 (remarks of A.L. Dow, Vice-President, Liberty Mut. Ins. Co.).

87. DEP'T OF COMMERCE STUDY, *supra* note 49, at 34. Moreover, they may request further increases this year due to "adverse claim experience." *Id.*

88. BUS. INS., June 10, 1974, at 33 (remarks of J.H. Femia, Travelers Ins. Cos.).

1966	$ 55 million[89]
1969	$ 85 million[90]
1970	$109 million[91]
1971	$122 million[92]
1972	$141 million[93]
1973	$240[94]-$299 million[95]
1975	$1.6 billion[96]

However, this analysis should not create the inference that insurers are adequately compensated for this increasing liability. Generally, the underwriting losses in 1975 were the worst in history,[97] as they had increased to $4 billion[98] from $500 million in 1973.[99] Even though the losses in miscellaneous liability insurance actually decreased from $763 million in 1974 to $620 million in 1975,[100] this still represents an aggregate loss of $2.5 billion from 1970 to 1975, and $2.9 billion from 1965 to 1975.[101] The following chart indicates these miscellaneous liability insurance losses (where data is available) in two columns: (A), the percentage of losses incurred as computed on the number of premiums written;[102] and (B), the combined loss and expense ratio, after dividends:[103]

Year	*A*	*B*
1970	73.7	-
1971	79.9	110.2
1972	84.4	114.7
1973	87.4	117.0
1974	-	125.9
1975	86.7	116.2

89. Stephens Speech, *supra* note 73. This figure as well as that cited to this source in note 91 *infra*, were computed by adding this report of bodily injury and property damage premiums.
90. DEP'T OF COMMERCE STUDY, *supra* note 49, at 44.
91. *Id.* *See also* Stephens Speech, *supra* note 73.
92. DEP'T OF COMMERCE STUDY, *supra* note 49, at 44.
93. *Id.*
94. Barile, *supra* note 55.
95. BUS. INS., June 10, 1974, at 33 (remarks of J.H. Femia, Travelers Ins. Cos.).
96. DEP'T OF COMMERCE STUDY, *supra* note 49, at 45. Miscellaneous general liability premiums were estimated at $3.7 billion. BEST'S REV. (prop. & cas. ed.), Jan. 1976, at 70 [hereinafter cited as BEST'S REV.]. The *Department of Commerce Study* extrapolated this figure from its rough estimate that product liability accounted for 40% of this total. DEP'T OF COMMERCE STUDY, *supra* note 49, at 40. Mr. Daenzer, *supra* note 52, asserted that the correct figure was 60%, and hence, $2.4 billion.
97. Wall Street Journal, April 7, 1976, at 7, col. 3.
98. INS. ADV., *supra* note 64, at 6 (remarks of T. Lawrence Jones, President, Am. Ins. Ass'n, stating the estimation of the A.M. Best Co.).
99. Barile, *supra* note 55; BUS. WEEK, *supra* note 64.
100. BEST'S REV., *supra* note 96.
101. *Id.* In the decade prior to 1965, the insurance line was profitable. *Id.* Moreover $1.8 billion was the aggregate loss in this area from 1969-1974. INS. ADVOCATE, Apr. 12, 1975, at 19 (remarks of R.R. Klein, Senior Vice-President, Employers Ins. of Wausau).
102. DEP'T OF COMMERCE STUDY, *supra* note 49, at 41.
103. BEST'S REV., *supra* note 96.

Based on the situation shown by these various statistics, it appears that products liability coverage will only be available for certain industry segments or at increased premiums,[104] with the result that it may be more difficult for smaller companies to secure advantageous rates.[105] However, the problem is not limited to securing insurance at advantageous rates.[106] Inasmuch as there is a general duty to avoid waste,[107] and in view of the prospectus filing requirements of the Securities and Exchange Commission,[108] the corporation also appears to have a responsibility to protect its stockholders by either guaranteeing the continuation of products liability insurance, or reducing its exposure by manufacturing safer and more reliable products.

Realistically then, businesses are no longer concerned with the possibility of spending more than is absolutely necessary on products liability insurance, but rather are worried about uninsured losses which could effectively compel corporate liquidation.[109] Perhaps the prime example is to cite the plight of the Havir Manufacturing Company. A small machine tool builder, located in St. Paul, Minnesota, the company was liquidated due to the non-availability of products liability insurance.[110] Mr. John Lenz, Havir's president, noted that although not many suits resulted in awards, their average $5,000 defense expense,[111] as well as the cost of out-of-court settlements, had lead to the company's demise.[112]

B. *Social Responsibility and Quality Control*

It has generally been noted that "[p]erhaps more than any other branch of the law, the law of torts is a battleground of social theory."[113] This is probably most true in the area of products liability, as manifested by the "cheapest cost avoider" theory.[114] This concept involves consideration of the party "in the best position to make the cost-benefit analysis between accident cost and accident avoidance costs and to act on that decision once it is made."[115]

Inasmuch as it is not the consumer, but rather the manufacturer, who is in this described position,[116] it should not be at all surprising that such an

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104. DEP'T OF COMMERCE STUDY, *supra* note 49, at 50.
105. NAT'L UNDERWRITER, *supra* note 64, at 17.
106. O'Connell, *An Alternative to the Products Liability Mess*, NAT'L UNDERWRITER (prop. & cas. ed.), Apr. 23, 1976, at 21 (remarks of D. Jordan, Ass't to the Deputy Undersecretary for Domestic Commerce).
107. *See, e.g.*, Davidson v. Shivitz, 354 F.2d 946, 949 (2d Cir. 1966).
108. *See* 15 U.S.C. §§ 77f, g, j, k, aa (1970).
109. *See* INDUS. DISTRIBUTION, Oct. 1975, at 49 (remarks of R.L. Larsen, President, Larsen Corp.).
110. BUS. INS., Oct. 20, 1975, at 1.
111. The cost of the legal defense for product liability claims in general has increased to the point where it now accounts for over 30% of the premium cost. DEP'T OF COMMERCE STUDY, *supra* note 49, at 9.
112. BUS. INS., Oct. 20, 1975, at 2.
113. PROSSER, *supra* note 32, at 14-15.
114. *See* Calabresi & Hirschoff, *Toward a Test for Strict Liability in Torts*, 81 YALE L.J. 1055 (1972).
115. *Id.* at 1060 (emphasis omitted).
116. *See, e.g.*, New York Chapter, Society of Chartered Property & Casualty Under-

interpretation was essentially outlined by comment *c* to § 402A of the *Restatement (Second) of Torts*. Here, in relation to a strict products liability theory, it was stated:

> On whatever theory, the justification for the strict liability has been said to be that the seller, by marketing his product for use and consumption, has undertaken and assumed a special responsibility toward any member of the consuming public who may be injured by it; but the public has a right to and does expect, in the case of products which it needs and for which it is forced to rely upon the seller, that reputable sellers will stand behind their goods; that public policy demands that the burden of accidental injuries caused by products intended for consumption be placed upon those who market them, and be treated as a cost of production against which liability insurance can be obtained; and that the consumer of such products is entitled to the maximum of protection at the hands of someone, and the proper persons to afford it are those who market the products.[117]

Notwithstanding the suggestion that there is no single method which would protect corporate products liability exposure,[118] it has also been proposed that "the best possible offense is a good defense."[119] Logically, the most readily accepted form of insulation has been one of quality control—*i.e.*, to design and produce a safe product. For example, in a survey by the A. T. Kearney Co., of 280 leading firms, 71% had a formal quality and safety program.[120] Many methods have been suggested for achieving such a goal;[121] however, it is not the purpose of this article to comment on their validity or feasibility. Instead, it is sufficient to simply realize their existence and proceed to an analysis of their economic viability.

C. *Cost-Benefit Analysis*

As has previously been noted,[122] accurate statistics in this area are generally unavailable. Moreover, the exact considerations which may be allocated to one factor as opposed to another would necessarily vary with the type of manufacturer or industry. Since the most practical manner of meeting this challenge is through the concept of product reliability, an analysis of the situational economics should be undertaken.

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writers (CPCU), *Products Liability: Where Are We Going*, in CPCU, PRODUCTS LIABILITY: AN AREA OF GROWING CONCERN (1976) [hereinafter cited as CPCU]; DEP'T OF COMMERCE STUDY, *supra* note 49, at 19.

117. RESTATEMENT, *supra* note 1.

118. DEP'T OF COMMERCE STUDY, *supra* note 49, at 9.

119. Bieber, *Product Liability Loss and Its Control*, in CPCU, *supra* note 116, at 47.

120. Kearney Report, *supra* note 62.

121. *See, e.g.*, Bieber, *Product Liability Loss and Its Control*, in CPCU, *supra* note 116, at 47; Brehn, *Consumer Product Safety: An Industry Program*, in CPCU, *supra* note 116, at 49-52; INS. ADVOCATE, May 13, 1972, at 25 (remarks of A. Spiegelman, Vice-President, Am. Ins. Ass'n); Karlin, *Maintaining Product Safety in a Multinational Corporation*, S.A.M. ADVANCED MANAGEMENT J., Winter 1975, at 22-28; Mercer, *Products Liability Law and Insurance: A Partnership of Insurer, Agents and Insureds*, in CPCU, *supra* note 116, at 12-18; MODERN PACKAGING, *supra* note 59, at 13-21. *See generally* L. GRAY, PRODUCT LIABILITY: A MANAGEMENT RESPONSE 151-205 (1975); PETERS, *supra* note 76, at 43-98.

122. *See* text accompanying notes 49-51 *supra*.

Today, a products liability suit not only adversely affects the financial resources of the firm,[123] but it may well influence the product research and development plans of the company,[124] engender the elimination of certain demonstrated high-risk divisions,[125] and compel the transfer of these increased insurance costs to the consumer.[126] Many self-insured (or, indeed, non-insured) companies may well select a safer product to reduce their insurance costs;[127] however, under a cost-benefit analysis, it would be to the economic advantage of *all* firms to adopt this type of reasoning. Since "[t]he amount of the potential dollar liability is likely to be inversely proportional to the amount allocated for preventive safety efforts,"[128] the result would be a cost savings to the firm.[129]

This approach is not merely one which should be examined for its practical utility, but is instead one which has virtually been mandated by financial exigencies. Both the present situation in products liability, as well as its possible continuation and increase in the future, may be due to the insurance industry's failure to identify and account for the countervailing social and economic forces.[130]

> Competitive market conditions within a particular institutional setting elicit the least cost method for producing those products and services desired by consumers. If competitive firms are held liable for losses associated with a hazardous product, they will minimize the cost of managing that liability and price that additional service in with the original product price. Should hazard removal be the more economic move by the firms, that will occur.[131]

Therefore, three distinct benefits may be obtained from employing a cost-benefit analysis. First, from a purely economic standpoint, if product defects could be eliminated at an overall cost less than or equal to the total existing and projected expense of products liability suits and their related factors, firms in this competitive market would be virtually compelled to seek product reliability. Second, the consumer would ultimately benefit from such a system, as the selling prices of goods could (and competitively speaking would) be reduced. Finally, society as a whole would no longer be subject to the very dangers which were the catalyst for increasing the scope of products liability coverage in the first instance.

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123. For example, one may identify the following costs as being relevant here: consumer injuries, product damage, defense expenses, and both civil and criminal penalties. *See Reduce Product Liability Losses Through Management Control*, Royal Globe Ins. Cos. Booklet 12-13 [hereinafter cited as Royal Globe Booklet].

124. PETERS, *supra* note 76, at 1.

125. *Id.*

126. DEP'T OF COMMERCE STUDY, *supra* note 49, at 11.

127. Marschall, *supra* note 21, at 1071 n.18.

128. PETERS, *supra* note 76, at 132.

129. "Compared to [these] skyrocketing costs . . . the expenses involved in an aggressive and dynamic products loss control program are miniscule." Royal Globe Booklet, *supra* note 123.

130. BEST'S REV., *supra* note 96, at 71.

131. Yandle, *Products Liability, Risk, and Economic Efficiency*, J. RISK & INS., Dec. 1974, at 706.

V. Conclusion

As has been demonstrated hereinabove, the expansion of products liability litigation and the increased awards in such litigations have had the inevitable result of substantially increasing the total awards being granted to injured parties.

The concept of insurance is to spread the risk of such losses. If the insurance industry is to remain viable, it must necessarily increase the premium dollars collected by it with which to pay such awards. This has, of course, occurred. Industry continues to pay ever increasing insurance premiums required for the payment of awards by reason of unsafe or unreliable products. It must surely be the response of industry to reduce those sums being paid as premiums by reviewing the design and manufacture of products so as to avoid or eliminate significant numbers of claims, with a view toward effecting savings in the amount of future insurance premiums.

In this sense, the expansion of products liability must be viewed as an opportunity for industry to meet its obligations and to manufacture its products so that they will be safe and reliable.