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PRODUCTS LIABILITY—SOME OBSERVATIONS ABOUT ALLOCATION OF RISKS

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I. INTRODUCTION

THE scientific and technological revolution through which our society is proceeding is accompanied by vast changes in existing products as well as a proliferation of new products, notably with respect to drugs, cosmetics, and other chemical products. For example, it has been noted that three fourths of the prescriptions written by doctors in the United States today are for drugs and vaccines which were unknown in 1950.[1]

> Barely a generation ago, a doctor's little black bag contained only a small number of effective drugs. In it were a few pain remedies, anesthetics, and antitoxins. His bag might also have contained mercury, quinine, digitalis, iodine, and opium in one form or another. All of these medications have been known for hundreds of years. They were the same ones, with few exceptions, that might have been used in treating an ailing Shakespeare. . . . But after the discovery of the first sulfa drug in the Thirties, a doctor's medical kit became a treasury of new drugs that helped to heal, to cure and to save lives. With this discovery, the world entered the age of chemotherapy—the treatment of disease with chemical agents.[2]

It might also be said that it is an age of chemocosmetology—the improvement of the appearance through treatment of the skin and hair. Many of the new products and so-called improvements in existing products are beneficial when viewed from the standpoint of the general good. Often, however, the benefits to the many come at a high cost to the few, for there are increasingly more opportunities for mishaps, not only in the manufacturing process, but also in the marketing and use of the finished products.

Today a great many more persons than ever before are being victimized by the dangers inherent in the use of consumer durable goods as well as products intended for intimate bodily use—foods, drugs, and cosmetics. This substantial increase in the incidence of unintended harm occurring in the course of, or as a consequence of, the use of products, together with the enhanced social concern for the victims of our modern devices, is bringing about a reexamina-

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1. National Observer, May 3, 1965.

2. Address by Edward D. Downing, *Peculiar Problems in Pharmaceutical Cases*, at Legal Institute, University of Arkansas, Oct. 1965.

tion of the principles formerly utilized by the courts for shifting losses. A prerequisite to the shifting of losses on a tort theory has commonly been a finding of fault on the part of the manufacturer or other seller. Until recently, moreover, contractual obligations, the bases of which are to be found in the commercial codes of the various states, have been limited largely to the parties to the sales or sales contracts and have been regarded as obligations that the parties could alter by clearly stating in their written agreements their intention to do so. As the scope of liability increases, orthodox contractual principles of freedom of contract are being qualified, and fault as a prerequisite for shifting losses on a tort theory is being abandoned. As might be expected, when substantial changes are made in the law, and especially when the change is effected by the judiciary by means of a case-by-case development rather than by the legislature, there is much uncertainty as to the ultimate extent of the change. The uncertainty is enhanced with regard to the liability of makers and sellers of products because the recent expansion of the scope of their liability has been the result of the application of two competing, but not necessarily inconsistent, theories—warranty and strict tort.[3]

Virtually all of the activities of mankind involve the use of some product. Consequently, nearly all losses in the nature of physical damage to persons or things, and a great deal of the economic losses flowing from inferior or unfit products, are factually caused by characteristics or conditions of products, or at least occur during the use of products. Therefore, when fault, in the sense in which fault has been used in the Anglo-American law of torts (a usage which frequently results in the imposition of liability without personal fault), is abandoned as a basis for shifting or allocating losses, some rules and principles must be substituted in its place in order to delimit liability; otherwise, the result would be a revolutionary scheme, involving the imposition of all losses on the makers of products as a class rather than upon the ultimate purchasers as a class. It has been suggested that something similar to this may indeed occur.[4] Even now, if it must be shown that the harm resulted from a defective condition of a product, some courts have assumed the existence of

3. See Pritchard v. Liggett & Myers Tobacco Co., 295 F.2d 292 (3d Cir. 1965) (warranty theory); Greenman v. Yuba Power Prods., Inc., 59 Cal. App. 2d 67, 377 P.2d 897 (1963) (strict tort theory); Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 69 (1960) (warranty theory); Goldberg v. Kollsman Instrument Corp., 12 N.Y.2d 432, 191 N.E.2d 816 (1963) (strict tort theory); Shanker, *Strict Tort Theory of Products Liability and the Uniform Commercial Code: A Commentary on Jurisprudential Eclipses, Pigeonholes and Communication Barriers*, 17 W. RES. L. REV. 5 (1965).

4. Cowan, *Some Policy Bases of Products Liability*, 17 STAN. L. REV. 1077 (1965).

a defective condition from (1) the unexplained occurrence of an accident in the course of an allegedly careful use of the product, and (2) the often unreliable testimony of an injured user that he was careful in the handling and use of the product. This practice lends support to the proposition that, realistically, the maker of the product is a risk distributor for all losses other than those attributable to certain known causes.[5] This problem will be discussed in more detail below, since the attitude of the courts concerning questions of proof and sufficiency of evidence is as important as are the substantive rules for defining the "risks" to be borne.[6]

II. The Arguments for Strict Liability

Avoidance of circuity of action has often been asserted as a justification for warranty liability without privity of contract. The warranties of merchantability and of general fitness for the purposes for which the product was made have long been imposed under sales law on the maker and other sellers in favor of an immediate purchaser in order to compensate him for economic harm.[7] Such a warranty, however, has not been universally imposed on the retail seller for the benefit of the ultimate consumer or user when the specific object was available for inspection and when the sale was not regarded as a sale by description.[8] Moreover, liability for physical harm under such a contractual or warranty obligation did not necessarily follow from the fact that the product was unsuitable for the purposes for which it was made. Thus, the abandonment of the privity requirement as a basis for recovery, whether done on strict tort theories or on warranty theories, constitutes a greater change than can be justified merely by the advantages derived from the avoidance of circuity of action. The issue, in fact, is not the avoidance of circuity of action, but rather the decision when and to whom a loss should be shifted.

The abandonment of privity as a requirement for recovery on warranty theories has also been supported by the argument that, as a practical matter, the ultimate purchaser or user is dealing with the maker who markets under a trade name and advertises nationally, and that resellers of all kinds are simply conduits, albeit separate

5. Evangelino v. Metropolitan Bottling Co., 339 Mass. 177, 158 N.E.2d 342 (1959) (bottle explosion incident to allegedly careful use); Bronson v. Hudson Co., 135 N.W.2d 388 (Mich. 1965) (dermatitis followed wearing of cotton slip).

6. See part IV *infra*.

7. See Uniform Commercial Code § 2-314.

8. See Honnold, Sales and Sales Financing 60-63 (1954); Ruud, *The Vendor's Responsibility for Quality in the Automated Retail Sale*, 9 Kan. L. Rev. 139 (1960).

legal entities, for distribution to the users.[9] Therefore, the obligations, whatever they might be, should run directly from the manufacturer to the purchaser-consumer, despite the indirect marketing process. Consistent with this approach, the warranty provisions of the Uniform Commercial Code have generally been interpreted to allow recovery in the absence of privity of contract.[10] But this analysis does not answer the questions relating to the liability of those entrepreneurs, other than the maker, who are involved in the marketing and distribution process, and it does not define the extent of the warranty or the legal obligations of the manufacturer.

The warranty of merchantability, and thus liability without fault, has often been explained on the theory of a tacit representation by silence; the maker tacitly represents that his product is fit for its general purposes, and the purchaser assumes that the product is what it purports to be.[11] Proof of the purchaser's reliance on such a representation is, of course, not necessary. The maker represents only that he has utilized reasonable manufacturing practices and has exercised reasonable skill and care in supplying his product to the public. No one assumes perfection in any maker's process. Indeed, it is well known that a few products coming off an assembly line will not be safe or fit for their intended uses, even when the utmost care is exercised. A product which is unfit for the purpose intended, however, frustrates consumer expectations, and a product that is dangerous for use as intended frustrates expectations regarding its safety. It may be argued that harm resulting from the frustration of consumer expectations as to a product's qualities or safety for use should be shifted to the maker as a cost of doing business. This use of the criterion of frustration as a justification for the imposition of liability has a tremendous impact on the extent and nature of strict liability. For example, the user of cigarettes is no longer unaware of the dangers of smoking; he elects to take a chance in order to enjoy the benefits of smoking. If frustration of consumer expectations as to the nature and quality of the product were the only basis for shifting losses without fault, recovery would be limited to only those consumers who had no knowledge of the risk. Stated generally, the rule would be that a consumer assumed any

9. Piercefield v. Remington Arms Co., 133 N.W.2d 129 (Mich. 1965) (defective gun —bystander allowed recovery); Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 696 (1960).

10. See generally Comment, *The Contractual Aspect of Consumer Protection: Recent Developments in the Law of Sales Warranties*, 64 MICH. L. REV. 1430, 1442-52 (1966).

11. See generally James, *Products Liability*, 34 TEXAS L. REV. 192 (1955); Prosser, *The Implied Warranty of Merchantable Quality*, 27 MINN. L. REV. 117 (1943).

risk of which he was aware before his injury. This conclusion was clearly stated in one of the recent cases involving lung cancer caused by cigarette smoking.[12]

The reduction of the incidence of harm resulting from unfit and unsafe products is often stated to be one of the reasons for the imposition of liability without fault on the maker and other sellers.[13] However, there are several problems with this argument. First, this rationale would frequently not justify imposing liability on resellers, since they may have no opportunity to discover the conditions that might produce the harmful results. The reseller's liability can generally be supported only by the theory that he is a convenient conduit for transmitting a loss to the maker, but the conduit argument is often a very doubtful justification. Second, the desire to reduce accidents justifies shifting losses to a manufacturer only if he could have eliminated a condition of the product that ought not to have existed. Consequently, liability should not be extended to makers for harm resulting from unavoidable injurious effects of highly desirable products, such as good penicillin, good cigarettes, or good whiskey. In addition, it is doubtful whether strict liability induces greater care than does negligence liability.[14] Moreover, if strict liability does induce greater care, it can be argued that it will also tend to inhibit the development of new products. Thus, the importance of the development of new products may be a factor to be considered in establishing the limits of strict liability.

The principal reason now widely accepted for shifting losses from consumers to manufacturers is that those engaged in the manufacturing enterprise have the capacity to distribute the losses of the few among the many who purchase the products. The assumption is that the manufacturer can shift the loss to the consumers by charging higher prices for the products.[15] In fixing limits to the legal liability of makers based on this view, in conjunction with the discussion above, it would obviously seem desirable for the courts and legislatures to consider other existing ways for shifting or guarding

12. Pritchard v. Liggett & Myers Tobacco Co., 295 F.2d 292 (3d Cir. 1965); Cintrone v. Hertz Truck Leasing, 45 N.J. 434, 212 A.2d 769 (1965) (lessor absolved from liability because of user's contributory negligence in using truck with knowledge of defect).

13. Escola v. Coca-Cola Bottling Co., 24 Cal. App. 2d 453, 150 P.2d 436 (1944); Jacob E. Decker & Sons v. Capps, 139 Tex. 609, 164 S.W.2d 828 (1942). *But see* the dissenting opinion by Judge Burke in Goldberg v. Kollsman Instrument Corp., 12 N.Y.2d 432, 191 N.E.2d 81 (1963).

14. Prosser, *The Assault Upon the Citadel (Strict Liability to the Consumer)*, 69 YALE L.J. 1099, 1119 (1960).

15. Greenman v. Yuba Power Prods., Inc., 59 Cal. App. 2d 57, 377 P.2d 897 (1962); Suvada v. White Motor Co., 201 N.E.2d 313 (Ill. App. 1965); Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 696 (1960); Goldberg v. Kollsman Instrument Corp., 12 N.Y.2d 432, 191 N.E.2d 81 (1963).

against losses. For example, the availability of, as well as the practices of acquiring, insurance is quite important. Since nearly every head of a family, with the exception of the indigent, protects himself and his dependents by means of life insurance, it may be undesirable to shift losses from wrongful deaths to makers without regard to this widespread use of life insurance.[16] Also significant is the fact that employees of industrial and commercial users of products are already covered by workmen's compensation, and thus a satisfactory compensation scheme might be an answer to the problem of distributing losses attributable to physical harms suffered in the course of their employment. Such a plan would eliminate the costly and time-consuming task of identifying the cause of an accident, such as an explosion that occurs during the use by one enterpriser of an oxygen cylinder supplied by a second enterpriser and an acetylene torch furnished by a third.[17] In these situations, the users of the products are fully capable of assuming and distributing losses.

III. The Risks To Be Allocated

Harm, whether it takes the form of an economic loss or a physical injury to persons or property, can occur for a variety of reasons because of, during, or following the use of a product.[18] First, the harm may have resulted, despite careful and proper use, from an unintended condition of the product that made it different from products of like kind made by the same manufacturer. Such an occurrence is frequently referred to as a miscarriage in the manufacturing process. Most of the leading cases applying principles of warranty or strict liability since the landmark case of *Henningsen v. Bloomfield Motors, Inc.*,[19] have involved harm resulting from such unintended

16. There is a conflict as to whether wrongful death statutes in the various states can be interpreted so as to permit recovery without fault. The language of most of the statutes provides for recovery when an injury causing the death of a person is caused by a wrongful act or neglect. Some courts have held that the wrongful death statute creates a cause of action only when the defendant's conduct constitutes a tort arising out of negligence. See Whiteley v. Webb's City, Inc., 55 So. 2d 730 (Fla. 1951); Howson v. Foster Beef Co., 87 N.H. 200, 177 Atl. 656 (1935); Di Belardino v. Lemmon Pharmacal Co., 208 A.2d 283 (Pa. 1965). Others have permitted a recovery: Dagley v. Armstrong Rubber Co., 344 F.2d 245 (7th Cir. 1965); Goldberg v. Kollsman Instrument Corp., *supra* note 15.

17. An employee-user recovered on strict liability theories against the supplier of an oxygen cylinder in Delta Oxygen Co. v. Scott, 383 S.W.2d 885 (Ark. 1964). Employees of an industrial user also recovered in Brewer v. Oriard Powder Co., 401 P.2d 844 (Wash. 1965), involving a premature explosion of dynamite. On the other hand, recovery was denied in Barlow Protective Mut. Ins. Co. v. DeVilbriss Co., 214 F. Supp. 540 (E.D. Wis. 1963).

18. A list of some of these reasons has been set forth heretofore by the author. Keeton, *Products Liability—The Nature and Extent of Strict Liability*, 1964 U. Ill. L.F. 693, 695.

19. 32 N.J. 358, 161 A.2d 696 (1960).

conditions. Examples of these conditions are the defective steering wheel of the automobile in *Henningsen,* the defective altimeter of the airplane in *Goldberg v. Kollsman Instrument Corp.*,[20] the inadequate set screws in the power tool in *Greenman v. Yuba Power Products, Inc.*,[21] the defective fork stem in *Putnam v. Erie City Mfg. Co.*,[22] and live virus in polio vaccine.[23] If liability without fault and without privity of contract is ever to be imposed on makers, it should be applied to compensate for injuries resulting from these or similar unintended conditions. Indeed, courts have quite generally recognized a miscarriage in the manufacturing process as a proper risk to be allocated to the manufacturer.

According to the *Second Restatement of Torts*,[24] an unintended and defective condition that arises during manufacture subjects the maker to strict liability on a tort theory if the defective condition is one that makes the product "unreasonably dangerous."[25] Some courts, by their use of language such as "imminently dangerous," imply that the test is whether the unintended condition made the product so dangerous that a reasonable man, with knowledge of the condition, would not have sold it as it existed. Thus the issue becomes whether the maker would have been negligent in selling such a product with knowledge of its condition. Assuming that the same defenses are available to a maker under the strict tort theory as are available to him when liability is imposed on a negligence theory, the only significant difference between the two approaches is that with a strict liability theory the injured party is relieved of the necessity of proving either that the defective condition was negligently created or that the maker or other seller knew of the condition or

20. 12 N.Y.2d 432, 191 N.E.2d 81 (1963).
21. 59 Cal. App. 2d 67, 377 P.2d 897 (1963).
22. 338 F.2d 911 (5th Cir. 1964).
23. Gottsdanker v. Cutter Labs., 6 Cal. Rptr. 320 (Ct. App. 1960).
24. See RESTATEMENT (SECOND), TORTS § 402A (1965):

(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.

25. Keeton, *Products Liability—Liability Without Fault and the Requirement of a Defect*, 41 TEXAS L. REV. 855, 859 (1963); Wade, *Strict Tort Liability of Manufacturers*, 19 SW. L.J. 5, 14 (1965). See also Keeton, *supra* note 18, at 702, where it is suggested that "unreasonably dangerous" means that the product must have been "so dangerous to the user in the condition that it was in that a reasonable man would not have sold it in such condition with knowledge of such a condition and appreciation of the danger."

should have discovered it in the exercise of ordinary care. Since one or both of these elements of a negligence action have frequently been inferred merely from proof of a defective condition, no revolutionary change has been effected by the imposition of strict tort liability for miscarriages in the manufacturing process.

A second type of risk is that a product may be wholly unsuitable for its purpose and yet not be unsafe to the user. When the issue concerns the liability of a maker or other seller for physical harm, the question for the jury is not whether the product was unmerchantable in the sense of having been unfit for its purpose, but rather whether the product was unreasonably dangerous to the consumer. It is submitted that courts should not confuse the jury by using language of "unfitness" when what is meant is "danger." A dangerous condition may very well be regarded as making a product unfit, but it is the magnitude of the danger that is the decisive issue. Minor defects should not result in liability.

Another distinct type of risk is exemplified by losses resulting from a condition of a product that was characteristic of all the maker's products of that same kind. That is, the product was exactly as it was intended to be and was properly used for the purposes for which it was designed, but harm nevertheless resulted. In some cases there may be a finding that the product was unreasonably dangerous in that it was designed improperly or made with ingredients that were too harmful, and that the imperfections were scientifically discoverable. In order to support recovery on a negligence theory, it would have to be established that the magnitude of the danger outweighed the usefulness of the product and that a reasonable man in the position of the maker should have appreciated the imbalance when the product was sold.[26] There would of course be differing opinions as to how much the manufacturer should have discovered of that which was scientifically cognizable.[27] If strict liability is applicable, there is no necessity for showing that, as a reasonable man, the maker should have had knowledge of his product's unsafe qualities. It is sufficient if, after accidents have occurred, it appears to have been an unreasonably dangerous product. Here again, nothing revolutionary has been achieved by imposing strict liability on makers. It can be argued that this type of liability will induce a

26. See Noel, *Manufacturer's Negligence of Design or Directions for Use of a Product*, 71 YALE L.J. 816 (1962).

27. For cases involving this problem, see Sylvania Elec. Prods., Inc. v. Barker, 228 F.2d 842, 848-49 (1st Cir. 1955), *cert. denied*, 350 U.S. 988 (1956); Braun v. Roux Distrib. Co., 312 S.W.2d 758 (Mo. 1958); La Plant v. E. I. du Pont de Nemours & Co., 346 S.W.2d 231 (Mo. Ct. App. 1961). See generally Keeton, *Products Liability—Problems Pertaining to Proof of Negligence*, 19 Sw. L.J. 26 (1965).

manufacturer to exercise greater care before he changes the design of a mechanical product or makes a new chemical product. Furthermore, it would be reasonable to expect that the consumers of the products would be fully capable of bearing such losses in the form of higher prices.

The approach must be different when the unreasonably dangerous nature of the product was not scientifically discoverable at the time the product was sold. This is not uncommon with drugs and other chemical products, for the full extent of the dangers involved in the use of some drugs cannot be known until there has been a period of use by human beings. Sometimes the side effects are not of sufficient seriousness and frequency to warrant withdrawal of the drug from the market, but at other times they are. For example, MER-29 was made and sold as an anti-cholesterol drug. Considering the rate of heart disease, it looked as if it would be a most significant product. The drug, however, produced serious side effects, including cataracts, and has been withdrawn from the market.[28] A substantial number of cases are pending against the maker. In one case the court held that the manufacturer was liable for the tragic consequences incurred by a few victims before it was discovered that the drug was so dangerous.[29] Similarly, in *Lartigue v. Reynolds Tobacco Co.*[30] the Court of Appeals for the Fifth Circuit took the position adopted in the *Second Restatement of Torts*[31] that the manufacturer of cigarettes did not warrant against undiscoverable risks of contracting lung cancer from the use of cigarettes. These are both situations where by hypothesis no amount of care would have disclosed the fact that the products were unreasonably dangerous. Since the products were in fact dangerous, the issues here are whether the victims of an experimental process are to be compensated and, if so, by whom.

Another problem, distinct from those considered above, is that of the allergic user. It is known that nearly all cosmetics and drugs will result in substantial harm to a certain percentage of persons. Injuries from drugs and cosmetics do occur to hypersensitive and allergic persons, even when proper care is exercised in the use of the products and there are adequate instructions and warnings con-

28. See Downing, *supra* note 2.
29. Cudmore v. Richardson-Merrell, Inc., 398 S.W.2d 640 (Tex. Civ. App. 1966).
30. 317 F.2d 19 (5th Cir. 1963).
31. RESTATEMENT (SECOND), TORTS § 402A, comments *j* & *k* (1965). According to comment *j*, there is no duty to warn of danger unless "by the application of reasonable, developed human skill and foresight" the maker would have discovered the danger.

cerning their use.[32] Assuming that these facts were established about a particular drug or cosmetic and that a plaintiff is shown to have suffered an allergic reaction to the product, should the maker be required to absorb the losses arising from such a reaction on the theory that he can do so as a cost of doing business? The decisions are in conflict with respect to the makers of cosmetics.[33] As to drugs, however, it does not appear that an allergic user has recovered absent proof of some negligence on the part of the manufacturer, either in failing to give proper instructions for the use of the drug or in failing to warn adequately about the dangers presented by it.[34]

Numerous other situations could arise in which an injured plaintiff might allege that a particular product, although properly made, was "defective." A few of these instances will be mentioned below in order to demonstrate that each situation presents a different risk and hence a different problem of risk allocation. First, the product may be mishandled by the user—for example, a negligently driven automobile. Second, the product may be misused by being inappropriately used for a purpose other than that for which it was made.[35] Third, the product, although used for an appropriate purpose, may be overused, as in the case of a prescription drug which produces an adverse reaction when excessive dosages are used. Fourth, a proper use of the product may involve the user in an accident caused by the activity of a third person using a different article, such as might occur in a collision between two airplanes. Fifth, the use of the product, although proper, may lead to injury to the user through the intervention of an unforeseeable force of nature, as in the case of an airplane crashing in a storm. Obviously, any of these situations may also arise in conjunction with a defective product; for example, an excessively caustic hair dye may be used by a consumer who negligently fails to follow directions as to its use.[36]

32. See Whitmore, *Allergies and Other Reactions Due to Drugs and Cosmetics*, 19 Sw. L.J. 76 (1965).

33. Jacquot v. Filene's Sons Co., 337 Mass. 312, 149 N.E.2d 635 (1958) (fingernail polish—no liability); Reynolds v. Sun Ray Drug Co., 135 N.J.L. 475, 52 A.2d 666 (Ct. Err. & App. 1947) (lipstick—liability); Bennett v. Pilot Prods. Co., 120 Utah 474, 235 P.2d 525 (1951) (permanent wave lotion—no liability); Esborg v. Bailey Drug Co., 378 P.2d 298 (Wash. 1963) (hair tint—liability).

34. For a case containing a complete charge to the jury on the subject of adequacy of warning regarding the dangers involved in the use thereof, see Cornish & Cornish v. Sterling Drug, — F. Supp. — (D.D.C. 1965).

35. See Gibson v. California Spray Chem. Corp., 29 Wash. 2d 611, 188 P.2d 316 (1948) (apple crop destroyed by chemical spray).

36. Pritchard v. Liggett & Myers Tobacco Co., 295 F.2d 292 (3d Cir. 1965) (voluntary exposure to known risk would bar recovery but contributory negligence without actual knowledge of danger would not); Maiorino v. Weco Prods. Co., 45 N.J. 570, 214 A.2d 18 (1965) (contributory negligence barred recovery by plaintiff who suffered lacerated left wrist in opening glass container).

IV. Allocation of Losses From Unknown Causes—Burden of Proof and Sufficiency of the Evidence

Each of the above situations presents a somewhat different risk or hazard, and indeed each can be further refined. However narrowly described, the issue in each case is how best to allocate the particular kind of loss among victims, users, retailers, distributors, assemblers, manufacturers of component parts, and enterprisers other than those involved in the manufacture and distribution of the product. There is, however, one other situation that should not be overlooked: a loss may occur under circumstances which make it impossible to ascertain its "cause" or "causes." The holdings of courts with respect to the allocation of the burden of proof and the sufficiency of the evidence to meet the burden frequently pose major problems in the area of products liability. If a court concludes, as a matter of substantive law, that a manufacturer is not liable for a loss resulting from the use of his product except when the loss arises from a "defective" condition, and that the burden of proof is on the injured claimant to establish the existence of such a defective condition, it is readily apparent that the position of the court with respect to the nature and quantum of proof required to justify a finding of a "defective condition" as a cause of the harm is of utmost significance. The imposition on a maker of strict liability, rather than liability based on negligence, for harm resulting from "defective conditions" does not alter the main issue: proof of the existence of a defective product.[37] Even if negligence is the only basis for recovery, proof of the existence of a defective condition at the time possession of the product was surrendered by the manufacturer frequently serves as a basis for an inference of negligence and for the application of the *res ipsa loquitur* doctrine, for if the defect in the product existed at that time, it is most likely to have been caused by the manufacturer, quite possibly as the result of negligence.[38]

Issues involving the sufficiency of the evidence which justifies a finding of a defective condition in a mechanical product are quite different from those presented when the products involved are intended for intimate bodily use, such as food, drugs, and cosmetics.[39] However, without regard to the nature of the product, the fact that

37. Keeton, *supra* note 27.

38. Lewis v. United States Rubber Co., 414 Pa. 626, 202 A.2d 20 (1964) (severed wire bead in an automobile tire caused blowout); Standard Motor Co. v. Blood, 380 S.W.2d 651 (Tex. Civ. App. 1964) (brake cylinder clogged with pieces of inner lining of flexible hose).

39. The major difference arises from the fact that unintended injury often flows from allergic reactions as well as from defects in such products.

injury occurs during or shortly following the use of a product does not normally justify a finding, either by the trial judge or the jury, that the plaintiff's injury resulted from an accident attributable to a defect in the product. Thus, the crash of an airplane does not, in and of itself, indicate that the airplane was defectively made, and when a car swerves off the road and crashes into a brick wall, it is more probable that the accident was caused by the driver's negligence than by a defect in the automobile. A chemical burn following the use of a hair dye that is by nature highly caustic does not, in and of itself, imply that the product was defective, any more than it implies misapplication by a beauty parlor operator, or an allergic or hypersensitive victim. No doubt there will be developed rules and principles which take into consideration the type of product; indeed, some have already been developed with regard to the nature and quantum of evidence required to justify the allocation of a risk to a maker of a product. These principles are based either on the theory that the maker should be liable for harm resulting from unknown causes or on the theory that the cause was sufficiently established. These rules cannot be overlooked as part of the process for the distribution and allocation of risks.

The foregoing observations may be illustrated by some examples. In *Henningsen*, the only evidence (at least the only evidence noted in the appellate opinion) of a defect in the new automobile that swerved off the road and crashed into a wall was the testimony of the driver that, without warning, there had been a loud noise from underneath the hood and that something appeared to have cracked. She testified that the steering wheel then spun in her hands and the automobile went out of control.[40] Of course, if there had been an investigation of the wreckage by an expert who could have identified a condition of the steering mechanism that was probably the cause *of*, rather than caused *by*, the accident, such evidence would generally be regarded as sufficient, not only to establish a defective condition, but also to establish that the maker was negligent either in creating or in failing to discover the condition. In the absence of that kind of evidence, the trial judge, concluding that a prima facie case of negligence had not been established, dismissed the negligence count but permitted the case to go to the jury on a warranty theory; this action was affirmed on appeal.

It is submitted that if the manufacturer is liable only when it is established that his product was defective, then the same proof is necessary to establish his strict liability for the defect as is necessary to

40. Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 696 (1960).

show negligence, since the latter can be inferred from a defective condition. In some cases, of course, it has been held that the testimony of a user indicating that an identifiable component of a product had malfunctioned was sufficient to establish a defective condition as well as negligence.[41] This is an understandable and reasonable position, but it should be noted that such evidence is frequently unreliable, especially in the absence of an explanation of why such a defect was unidentified after the accident. In cases involving a car swerving off the road without explanation, some courts have inferred, and no doubt quite correctly, that the driver was negligent.[42] The question is therefore whether, if the accident is one that, without explanation, points to user negligence or error of judgment, the user's testimony of (1) his own proper conduct in the use of the product and (2) a malfunctioning of the product should justify the allocation of losses resulting from such an accident to the manufacturer. Practical problems in the fact-finding process are involved here, and principles of both liability and proof, to be theoretically sound, must take account of these problems. To question the probative value of the user's testimony is not to say that harm from accidents resulting from unknown causes should not be allocated to the maker of the product. However, if the cost is to be allocated to the manufacturer of a particular product, it should be so allocated not on the basis of the technical legal rationales which have been developed to justify the shift, but rather on the basis of a policy decision which recognizes the superior ability of the maker to bear the loss. Thus, there is a substantial difference between the claim of the ordinary consumer who suffers injury during or after his use of a product and the claim of one injured as a result of the use of a product in the performance of a service by a professional or an entrepreneur such as an airline, a beauty parlor operator, or a physician.

To illustrate the importance of the questions involved in the allocation of losses from unknown causes, and to demonstrate that the theory for the allocation of risk is often not so important as the position of the court regarding the sufficiency of the evidence to establish the existence of a defective condition, attention is directed to an opinion of an intermediate appellate court in California approving the action of the trial judge, who at the close of the evidence dismissed a warranty count brought by the owner of a building

41. Testimony of brake failure has been regarded as sufficient for inferring the probable presence of a defect when possession of a car was surrendered by its maker. Vandermark v. Ford Motor Co., 37 Cal. Rptr. 896, 391 P.2d 168 (1964); Comstock v. General Motors Corp., 358 Mich. 163, 99 N.W.2d 627 (1959).

42. Reibert v. Thompson, 302 Ky. 688, 194 S.W.2d 974 (1946); Etheridge v. Etheridge, 222 N.C. 616, 24 S.E.2d 477 (1943).

against the maker of a heat pump for an air conditioning unit. At the same time, the appellate court reversed the trial judge's refusal to recognize the applicability of *res ipsa loquitur* to the plaintiff's negligence theory.[43] A fire had broken out in a so-called plenum—a wooden box through which the heat pump propelled hot and cold air. Vents in the plenum directed hot and cold air to the rooms in the building. The defendants were the contractor who installed the air conditioning equipment and the maker of the heat pump. The appellate court concluded that, although the trial judge's finding as to the insufficiency of the evidence to establish a defective condition of the heat pump should not be disturbed, it would not have been inconsistent with that finding for the judge to have inferred negligence on the part of either or both defendants pursuant to the *res ipsa loquitur* doctrine. It would appear difficult to justify a finding of negligence against the maker of the heat pump without also finding a defective condition, and the latter finding would be the only requirement for strict liability. This case is mentioned simply to demonstrate the importance of rules pertaining to proof of negligence and proof of defective conditions in the allocation of risks.

As a practical matter, the liability of suppliers of cosmetics, drugs, and other products intended for intimate bodily use may be expanded more by rules pertaining to the sufficiency of the evidence to establish a defective condition than by the rejection of the usual requirement of negligence or fault as a basis for shifting a loss. When injury occurs during the use of a drug or a cosmetic, the harm may be explained by factors other than the existence of a defective condition of the product. The victim may have suffered from an allergic reaction because of a sensitivity that he normally has to a particular substance, or he may have been suffering from a hypersensitivity caused by a temporary abnormal condition, such as an illness. Another possibility is that the product may have been so inherently toxic that an overdosage, an overuse, or a misuse would have adversely affected most people. It follows, therefore, that even when the injury occurs in such a way as to demonstrate conclusively that the victim's reaction was caused by the product, it is not necessarily more likely that the reaction was due to a defective condition than that it was due to misuse or hypersensitivity. Thus, in *Hanrahan v. Walgreen Co.*,[44] the court held that plaintiff could not recover for a chemical burn suffered after the use of a hair rinse because there was "no evidence . . . that the hair rinse contained any poisonous or dele-

43. Greening v. General Air Conditioning Corp., 43 Cal. Rptr. 662 (Dist. Ct. App. 1965).

44. 243 N.C. 268, 90 S.E.2d 392 (1955).

terious ingredient to a normal person who used it."[45] Similarly, in *Benavides v. Stop & Shop, Inc.*,[46] plaintiff was denied recovery for an injury to her eye following the use of soap. The court, making it clear that plaintiff had not established that the product was defective by merely showing an injury following use, remarked that no evidence of a chemical analysis of the product had been introduced to establish the existence of an irritant which would have made the product defective.

On the other hand, in *John A. Brown Co. v. Shelton*,[47] plaintiff recovered for damages resulting from a chemical haircut and burns following the application of a product known as "Tint 'N Set." No chemical analysis of the particular product was given in evidence, but the user testified that the material was "off color" and that the hair gummed and matted when it was applied. Likewise, the Michigan Supreme Court recognized that there was sufficient evidence to establish that a defective condition of a slip was a cause for plaintiff's dermatitis without proof of an identifiable harmful substance in the slip.[48] In that case, plaintiff claimed that severe dermatitis had been caused by an irritant in the slip and that the emotional stress that ensued had triggered a heart attack. The majority concluded that a legitimate inference could be drawn from plaintiff's proof that an irritant was present in the cloth and, while recognizing that evidence in rebuttal by the defense might well refute the plaintiff's case, reversed the trial judge's dismissal of the action. The dissent, however, indicated that the result was indeed novel unless one was prepared to say that use plus injury equals a prima facie case of liability.

V. Nature of Harm and Type of Purchaser

In developing a system of rules and principles for the allocation of the risks of harm involved in the use of products, especially as between purchasers and manufacturers, several courts have suggested that distinctions ought to be made among the various types of losses which a claimant seeks to shift to someone else. While many of the same principles will and should ultimately apply regardless of the nature of the loss, there are persuasive reasons for making some distinctions among different types of harm, at least until the effect of the imposition of strict liability can be more satisfactorily evaluated. There are at least four feasible categories of harm: (1) physical injury to persons; (2) physical damage to tangible things other than

45. *Id.* at 270, 90 S.E.2d at 394.
46. 190 N.E.2d 874 (Mass. 1963).
47. 391 P.2d 259 (Okla. 1963).
48. Bronson v. Hudson Co., 135 N.W. 388 (Mich. 1965).

the product itself; (3) physical harm to the product itself; and (4) commercial or economic losses which involve no physical harm and which are occasioned by the unfitness of the product, either for the specific purpose of the user or for the general purposes for which the product was made and sold.

Seely v. White Motor Company[49] is a leading case in which the distinction between commercial losses and physical harm is explained both by the majority and the concurring opinions. The claimant, who was engaged in the business of heavy-duty hauling, purchased from a retail dealer a truck manufactured by the White Motor Company. Shortly after he acquired the truck, the plaintiff discovered that it bounced violently, an action known as "galloping." For eleven months the retail dealer and the manufacturer's representatives made unsuccessful attempts to correct the defect, and ultimately the truck overturned. Although no one was injured, two claims were made: a claim of $5,466 for physical damage to the truck arising out of the accident and a claim of about $20,900 for economic and commercial losses, including payments on the truck and lost profits suffered during the period of the truck's defective performance. At the time of purchase, the plaintiff had signed a document that included the usual manufacturer's warranties and disclaimers. It was found at the trial that the accident was not caused by the galloping characteristic of the truck, and so the liability of the maker for physical damage to the truck was not in issue.

Chief Justice Traynor, in the majority opinion in *Seely*, took great pains to develop the theses that "the law of sales has been carefully articulated to govern the economic relations between suppliers and consumers of goods,"[50] and that the commercial codes adopted in most of the states should therefore be regarded as the source for ascertaining the rights and obligations of those in the distributive chain. Thus, the law concerned with liability for commercial losses, including questions relating to the validity and effect of disclaimer clauses and to the liability of makers and distributors to those who either are not in the distributive chain at all, such as bystanders, or are not in privity of contract in a marketing sense, should be developed independently of the law involving claims for physical damage either to persons or tangible property. The latter claims are to be governed in California by the rules and principles of tort responsibility, rather than by warranty or contractual theories. However, since virtually all courts recognize that the implied warranty of merchantability or general fitness of the product for its intended pur-

49. 45 Cal. Rptr. 17, 403 P.2d 145 (Sup. Ct. 1965).
50. *Id.* at 21, 403 P.2d at 149.

poses is an obligation imposed by law on the seller and is a species of strict liability which does not depend on the seller's expressed intention to be bound, it would appear to be relatively immaterial whether the theory for the imposition of liability, either for commercial losses or for physical harm, is regarded as tortious or contractual. This is not to say that the rules and principles set forth in the commercial codes primarily for the purpose of shifting commercial losses should be transferred *in toto* to damages claims for physical harm. In the *Second Restatement of Torts*,[51] the American Law Institute adopted a principle of strict tort liability but limited its application to cases involving physical harm, on the assumption that the commercial codes should be interpreted so as not to prevent the development of rules and principles for allocating physical losses among victims, makers, and other sellers of products. Thus, the distinction made in *Seely* follows the ideas set forth in the *Second Restatement.*

Other courts have recognized the significance of this basic distinction between commercial losses and physical damage. The Oregon Supreme Court recently adopted the position of the California Supreme Court, justifying its decision by pointing out that courts have frequently overlooked fault and privity requirements in cases involving physical injuries to persons because the "hazard to life and health is usually a personal disaster of major proportions to the individual, both physically and financially, and something of minor importance to the manufacturer or wholesaler against which they can protect themselves by a distribution of risk through the price of the article sold."[52] In this particular case, the court held that a wholesaler of a tractor would not be liable to an ultimate purchaser for commercial losses arising from the tractor's defective construction.

Historically, in cases based on tort theories of liability, the determination of (1) the kind of fault, if any, necessary to subject an actor to legal liability, (2) the ambit of his responsibility for the remote and unintended consequences of his acts, and (3) the class of persons to whom he is liable, has been governed by different legal rules and concepts depending on whether compensation was sought for physical injury or for economic loss. Numerous examples could be given, but two should suffice. Negligent conduct that prevents the performance of a contract does not normally subject the actor to liability for the economic loss to the promisor resulting from his inability to perform his contract.[53] Likewise, one who innocently, albeit negligently,

51. Section 402A.
52. Price v. Gatlin, 405 P.2d 502 (Ore. 1965).
53. Donovan Constr. Co. v. General Elec. Co., 133 F. Supp. 870 (D. Minn. 1955),

induces another by his misrepresentation of fact to make a disadvantageous contract is not subject to liability for the economic loss suffered by the representee.[54] On the other hand, few persons would question the proposition that a negligently uttered false statement calculated to induce the kind of reliance that was in turn likely to cause physical injury should and does subject the representer to liability. The distinction between an actor's liability for economic loss and his liability for physical harm has been carefully made throughout the *Second Restatement.* This distinction arises not only from legal history, but also because the problems of recovery for economic loss and for physical injury differ in many ways. For example, the kinds of questions that are involved in deciding whether a retail druggist, as a maker of drugs, should be held liable to the victims of MER-29[55] are quite different from those which arise when an adhesive purchased from a chemical company fails to hold glass window panes in place, and the contractor is forced to replace several thousand panes at great expense.[56]

This is not to say that certain critical observations in Justice Peters' concurring opinion in *Seely*[57] are not worthy of thoughtful consideration in determining the best allocation of risks among victims, users, and the various links in the manufacturing and distribution processes. Justice Peters' position was that the majority unduly feared that if the same strict liability rules were made applicable to economic losses as are applied to physical injuries, "the manufacturer would be liable for damages of unknown and unlimited scope."[58] He believed that it was not the nature of the damage but rather the nature of the ultimate transaction and the relative roles played by the parties in the distribution and use of the product that were important. This writer would not exclude those considerations because they may often be of greater importance than the nature of the damage. In fact, the following additional considerations are also rele-

8 STAN. L. REV. 725 (1956). The leading case is Lumley v. Gye, 2 E. & B. 216 (Q.B. 1853).

54. Derry v. Peek, [1899] 14 A.C. 337. Some courts have held parties to the contract strictly accountable for economic loss resulting from misstatements of fact, but this type of responsibility has been limited to parties to the contract and has the same economic effect as rescission, since the parties are restored to status quo. Aldrich v. Scribner, 154 Mich. 23, 117 N.W. 581 (1908).

55. See McLeod v. Merrell Co., 114 So. 2d 736 (Fla. 1965). The court held that a retail druggist would not be strictly accountable and there was some indication that, as regards an experimental drug such as this, the maker would not be held liable. See text accompanying note 28 *supra.*

56. Atlas Aluminum Corp. v. Borden Chem. Corp., 233 F. Supp. 53 (E.D. Pa. 1965).

57. Seely v. White Motor Co., 45 Cal. Rptr. 17, 403 P.2d 145 (Sup. Ct. 1965) (concurring opinion).

58. *Id.* at 28, 403 P.2d at 156.

vant: the nature of the user of the product, the methods employed in the article's manufacture and distribution, the types of entities involved in the manufacturing and distributing processes, the type of activity that the user was engaged in when the harm occurred, the class of people to which the victim belongs, and the legal process involved in shifting losses.

It is at least arguable that, in the absence of a miscarriage in the manufacturing process, the maker of a drug, especially one designed to save lives, should not be subjected to liability for the consequences to those who are harmed by its use, even if the drug, after an experimental period, is subsequently withdrawn from the market as an unreasonably dangerous product. Such an imposition of liability could produce socially undesirable results by discouraging the development of new drugs, and there may be better ways for society to compensate those who are injured during the experimental period. On the other hand, enterprisers engaged in distributing non-essential products like cosmetics may well be expected to bear the risks of any scientifically undiscoverable dangers that are ultimately the cause of the product's being withdrawn from the market. A general principle of liability for harm resulting from scientifically undiscoverable risks, applicable to all kinds of products and all types of makers and sellers, may be unsound, but it does not follow that the only alternative is a general principle of non-liability for such risks.

It may be that most victims are prepared to bear such losses or can be educated to be willing to accept them. Moreover, if this is not the case, then, as Judge Burke pointed out in *Goldberg v. Kollsman Instrument Corp.*,[59] "inherent in the question of strict products or enterprise liability is the question of the proper enterprise on which to fasten it."[60] It may be, for example, that the more appropriate group to which losses from airplane accidents should be shifted is the patrons of the airlines rather than the makers of the airplanes, even when the accident is due to a miscarriage in the manufacturing process. This would eliminate the time-consuming and expensive task of allocating risks on the basis of a judicial determination of whether the accident was due to abnormal weather conditions, a miscarriage in the manufacturing process, or a miscarriage in the use of the aircraft. Why should an effort be made to determine whether an accident was due to a miscarriage in manufacturing or in use if the patrons of the airline are ultimately to bear the cost through higher prices? It would appear that consideration has been given to only

59. 12 N.Y.2d 432, 191 N.E.2d 81 (1963) (dissenting opinion).
60. *Id.* at 440, 191 N.E.2d at 85.

one of several factors when courts have purportedly extended strict liability to the makers of all kinds of products, rather than only those intended for intimate bodily use, on the theory that it is just as important to protect against externally caused injuries as against injuries internally produced. That accidents should be prevented, and that victims should have means available to safeguard themselves against injury and relieve themselves of the burdens of those accidents that do occur are acceptable propositions, but they do not answer the question of how best to achieve these desirable objectives.

Producers of products that are made and designed only for use by experts and professionals may justifiably be treated differently from makers of products that are available to the general public. Thus, the rules for the allocation of losses resulting from the use of inherently dangerous prescription drugs or cosmetics, such as hair bleaches, need not necessarily be the same as those applicable to drugs and cosmetics obtained over the counter. Since prescription drugs are by their very nature inherently dangerous and are known by all concerned to be so, even though the extent of the danger may be unknown or undiscoverable, and since they are not often utilized except when a patient's life or health is already endangered by some other cause, it is quite possible that it would be highly desirable to distinguish, as at least one court has done,[61] between dealers in prescription and in non-prescription drugs.

VI. Conclusion

No consideration of how the law should allocate risks of harm occurring during the use of products is complete without a discussion of the validity of contractual arrangements for the allocation of such losses. However, no attempt has been made here to deal with this important problem. Moreover, except as the question has been mentioned incidentally, nothing has been said herein about when, if ever, liability without fault should be imposed on the maker of products in favor of those who were not users but who were in the zone of danger of an unreasonably dangerous product. With respect to this problem, most courts, especially those following warranty theories, have seen fit to disregard privity of contract only in a marketing sense and have limited recovery to those in the distributive chain—consumers, users, and those in their immediate households. It can safely be said that it will be quite some time before the law pertaining to this subject becomes stabilized and predictable.

61. McLeod v. Merrell Co., 114 So. 2d 736 (Fla. 1965). The court seems to say that the warranty of merchantability should apply only when goods are offered for consumption to the public generally, and, since MER-29 was not available to the public generally, its merchantability was not warranted.