October 2002

Products Liability - Emerging Consensus and Persisting Problems: An Analytical Review Presenting Some Options

Dr. J. Stanley McQuade
Campbell University School of Law

Follow this and additional works at: http://scholarship.law.campbell.edu/clr

Part of the Torts Commons

Recommended Citation

This Article is brought to you for free and open access by Scholarly Repository @ Campbell University School of Law. It has been accepted for inclusion in Campbell Law Review by an authorized administrator of Scholarly Repository @ Campbell University School of Law.
ARTICLE

PRODUCTS LIABILITY - EMERGING CONSENSUS AND PERSISTING PROBLEMS: AN ANALYTICAL REVIEW PRESENTING SOME OPTIONS

Dr. J. Stanley McQuade*

PART I - INTRODUCTION AND DESCRIPTION OF METHODS

§1 The problem and various responses to it

The National Commission on Product Safety reported in 1970 that 20 million Americans are injured each year in accidents related to defective products. Of these over 100,000 were permanently injured resulting in 30,000 deaths. Similar figures in proportion to population were reported for Britain and for continental Europe. A number

* Dr. J. Stanley McQuade, Lynch Professor of the Philosophy of Law, received his law degree with top honors from The Queens University of Belfast in 1950. Thereafter he received his B.D., B.A., Ph.D., and M.D. degrees from the same university, as well as a Masters degree in Theology from Union Theological Seminary. A certified anesthesiologist, he is a prominent national lecturer on law and medicine topics. He has also served for 25 years as a Methodist minister and has published several works in the areas of law and medicine and jurisprudence, including Jurisfiction, Analyzing Medical Records, Medical Practice for Trial Lawyers, and Determining Medical Damages and Disability. He is also Medical Editor for Westnet's ten-volume Attorney's Medical Advisor and Atlas. Dr. McQuade teaches jurisprudence, Products Liability, and Law and Medicine at Campbell University School of Law.

2. Id.
3. These and other valuable statistics and comments on the same can be found in studies by Christian Jeorges et al., on the Europeanization of public safety law,
of strategies have been developed to deal with this situation, including the following:

1. Funding and encouraging research to determine the causes of product related accidents, with a view to developing preventive strategies.
2. Developing government regulations and standards backed by penalties, for manufacturers and suppliers.
3. Publishing private standards by industry organizations.
4. Public education projects to encourage safe practices by users.
5. Private litigation to compensate injured persons, but also to encourage concern for safety among manufacturers.

These various approaches to the problem interact with and support one another to some extent. Governmental regulations provide standards and create legal duties which courts can use in private litigation. Litigation provides a tax-free (though by no means cost free) enforcement agency for the regulatory agencies. Public education in safety provides respect for product law and may also function in the courts as the context for instructions and warnings.

Much ink has been spilled discussing the effectiveness of each one of these measures. They are all beset with problems, many of which appear to be endemic. The reporting of accidents, which provides one of the most important data bases for research, has proved to have numerous difficulties, both theoretical and practical. Measuring hazards is a science in itself, with more than one way to do it and with the choice of method affecting the results. Government regulations may be inappropriate and out of touch with what is really happening in industry and even when apt, the regulations are often unenforced. Private standards, provided by industry, must achieve some kind of consensus agreement among the collaborating manufacturers. These standards thus tend to be to represent the lowest common denominator that will be acceptable to the business community. Public education has a place, but it is becoming apparent that very large expenditures of money and effort are required to produce very modest changes in public behavior. Private litigation does not seem to have dramatically reduced the incidence of product related accidents. Man-

---

4. See Jeorges et al., supra note 3, at §1.2.
5. Cynics, and they may be right, claim that legislators produce numerous safety regulations, which please the general public, and then do not enforce them, which pleases industry, so that everybody is happy though nothing gets done.

---

Manufacturers, who have been sued, tend to make changes in their designs and in the warnings and instructions that accompany their products—but the accidents still occur, for it is impossible to produce a completely accident-proof car (or any other device). Someone, somewhere will somehow manage to have an accident and be injured.

Nevertheless, these efforts have not been entirely in vain. The chairman of the National Product Consumer Safety Commission, established in 1973, reported to Congress in 1981 that the number of accidents had risen to 33 million per year with 28,000 deaths and an annual cost to the nation of 500 billion dollars. In 2001, the report showed some improvement with 29 million product related injuries resulting in 22,000 deaths, and the cost of accidents to the nation was reported to have decreased by some two to three billion annually. The report attributed the improvement to the efforts of the Commission and other concerned groups and parties. The most significant decreases were in the area of children's toys and bedding materials, where safer design is possible. This lowering of accident rates is commendable but small and the reduction in cost to the nation, again desirable, represents only a little bite out of a 500 billion-dollar apple.

The focus of this article is on the legal response, but not with much hope that this or any other means will make a significant impact on the incidence of product related accidents. If user fault is a major component in most of these accidents, as seems to be the case, they will continue to occur at a high level of frequency, since it is very difficult to produce fool-proof articles or cause changes in user behavior. The aim is rather to produce a clear representation of the present law, and to consider how it might be improved to achieve certain modest ends especially:

1. To facilitate the just compensation of accident victims.
2. To make the compensation system fair not only to those injured, but also to the community at large (community respect for the law is important).
3. To allow reputable manufacturers to function without being distracted from their business by excessive concern about the possibility of litigation.
4. To help business interests competing in foreign markets.

6. Jeorges et al., supra note 3, at §1.1.
7. Id.
8. Id.
These objectives, like all values, will conflict at times and must be balanced against one another to achieve the best result. This can be described as a harmony of values (justice as defined by Plato).9

§2 Brief historical introduction to products liability law

The relevant history of products liability actions is very recent. It began early in the twentieth century with the landmark case of *MacPherson v Buick Motor Co.*10 However, it was not until the nineteen-sixties that the pace of development accelerated and radical changes began to occur. Expansion continued through the seventies and early eighties with recoveries by injured plaintiffs becoming easier and larger in amount. The cost, both financially and in other ways, became apparent. In the more difficult economic times of the eighties, some counter-movements began, designed to check or even reverse many of the earlier plaintiff-friendly developments. The products liability reform statutes, which these counter-reformations produced, have been controversial, and the struggle between the plaintiffs' and defenses' interests continues with reform legislation being challenged in the courts and in some cases being declared unconstitutional.11

All this legal activity has provided a wealth of material for scholarly analysis and very able people have been at work, organizing and arranging these materials into a mature legal apparatus that is consistent and complex enough to handle most products liability situations.12 However, this work is still relatively recent and not as well

9. *Republic*, Book 5, where justice in the individual soul and also in the state are described as a harmony among the constituent elements of each.
11. This history has been recounted in innumerable articles and in court opinions. See R.A. Epstein, *CASES AND MATERIALS ON TORTS* p.714 (7th ed. 2000). See also James Henderson & Aaron Twerski, *PRODUCTS LIABILITY* p.204 (3rd ed. 1997).
12. The European Union model products directive is very simple, not to say simplistic, and presents only general principles which member nations (and also cooperating nations in other parts of the world, e.g., the middle and far east) are expected to embody in more detailed legislation. Not all members have complied and there is still a good deal of generality in the formulations used. This is of course to be expected in Civil Law jurisdictions where the code is expressed in rather general terms that are expected to be filled out by case law (officially not binding). European lawyers have, not surprisingly, looked to American developments to fill in the gaps. Furthermore, the EEC directive, which was produced in the sixties, adopted somewhat uncritically §402A of the Restatement (Second) of Torts and so inherited all the problems lurking within that apparently clear and fair statement. The most important example is the failure to distinguish the different types of defect, with all kinds lumped together and defined in terms of the "user expectation test" which has now been largely abandoned by the majority of the courts and most learned commentators in
known as it should be to practicing lawyers and judges. Otherwise competent and capable judges have admitted that they are uncomfortable hearing products cases. Some have even confessed (privately) that their main objective, when they must hear one, is to maneuver procedurally to avoid being overruled and embarrassed. There is a great deal of excellent literature on the subject, but it is often complex and difficult to master without help. What is proposed here is a simple analytical presentation designed to help members of the legal community who are not familiar with the area to get a clear overall picture and enable them to make up their own minds on issues where there is no general agreement. The proposed treatment may be outlined as follows:

The remainder of the introductory section (Part I) will outline methods and presuppositions. Part II will present a very brief overview of the modern history of the development of products liability law, showing how a consensus on the major issues has emerged. Part III will deal with some central notions in modern products liability law. Part IV will describe and discuss some persistent remaining problems and suggest possible solutions.

In making proposals to resolve these perennial problems, I am not presuming to tell the legal community what to do, but rather am laying out the various options, with the arguments for and against them, so that legal professionals can select the course that seems best to them and do so in a rational manner. Unfortunately, much of the discussion of these troublesome issues in learned periodicals, takes place in a political framework and indeed commonly takes the form of thinly disguised political rhetoric, so that one can predict the ultimate solution that the protagonists will propose by understanding their political affiliations. In so far as it can be avoided, I have tried to stay clear of this kind of political discussion and sought rather to focus on the kind of decision-making that lawyers of any political persuasion (or none) might engage in.

the U.S. It must be remarked, however, that the European Community and its affiliates consider themselves to have a number of significant advantages over the U.S; especially that they have no juries; no punitive damages; few or no collateral sources; limited recoveries for pain and suffering, etc. See Product Liability and Innovation: Managing Risk in an Uncertain Environment, National Academy Press (1994). See also Stephen B. Presser, How should the Law of Products Liability be Harmonized? What Americans Can Learn From Europeans, GLOBAL LIABILITY ISSUES Vol. 2 (February, 2002).
§3 Underlying presuppositions and methods - the use of modern logics and value theory

I acknowledge without apology, as a teacher of Jurisprudence, a firm belief in the practical importance for law of reflection on basic underlying notions—in other words philosophy. Philosophical questions, like the notion of defect in products liability, are difficult to define in general, but can be arranged (like Roman Gaul and modern products law) into three sets of questions. These are:

1. **Ontology: questions about the nature of anything.** One may ask for instance what is an electron? or what is space? or what is mind? or what is law? Various answers are possible to each of these questions, and in the eyes of some they are unanswerable and therefore frivolous and unimportant. We will not debate at present the charge of frivolity, but will take issue with any who doubt their importance. The various views on the nature of law have produced the schools of jurisprudence and have profoundly affected the ways in which law is researched, studied and practiced. However, ontological questions do not directly impinge on products liability law to any great extent and will be set-aside for the present.

2. **Logic.** This is theory about method, the ways in which knowledge or argument should be formally arranged, and is commonly called *formalism*. Organization is vital in any serious study and is certainly so with law. Critics of legal logic and especially logical skeptics, seem to have completely failed to understand what modern logic is about. It has virtually nothing to do with the syllogisms of Aristotle, which in my (possibly radical) opinion no longer have any place in legal education and not much use elsewhere. Aristotle’s logic stimulated medieval lawyers to introduce form and organization into the writing and teaching of law. They saw themselves as Aristotelians, but fortunately did not attempt to squeeze law into the syllogism. Instead, they devised looser and less clearly defined arrangements, using elements (key terms) to organize cases under the forms of action, and developed maxims to direct the law to good ends. Including cases under legal categories, like negligence or nuisance, may seem like syllogistic logic, but there is one essential difference—the conclusion is not contained in the major premise and does not follow necessarily from it, as the syllogism requires. Modern formal systems (logics) only resemble the syllogism in the most general ways and can be grouped in three classes, namely:

   a. word logics: identifying key terms and applying them to cases;
   b. branching logics: algorithms that take one through the serial steps of an organizational or decisional process;
c. factor analysis: where considerations are balanced against one another in deciding whether or not to take some course of action.

Word logics are so commonly used in legal analysis that no further explanation is required. Defining and applying key terms has been the major tool of legal education and legal writing from the era of the great Roman jurisconsultants through modern times.

Algorithms are basically the tools used by computers to perform functions. They are also extensively used in medical and business practice, where they act as communication devices (showing how the author views a subject matter) or as check lists to make sure that no important consideration (e.g. a symptom or a diagnosis) has been overlooked. Branching diagrams have been used in this article to represent particular areas of products liability law.

Factor analysis is extensively used in making difficult decisions. In medicine it may be used to decide whether to treat a condition medically or resort to a surgical procedure. It is also used in business, for instance to decide at what point to sell shares. Factor analysis is also used, or perhaps abused, in legal writing, e.g., in deciding when to make a smelly factory move elsewhere. The sad thing about the legal factors is that they are simply listed, with no means of determining how the list is to be used. In medicine and business there are two basic methods of handling factors. They can be divided into major and minor items and a formula provided to help make the decision (weighted factor systems). This method is used in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), to help decide which is the most appropriate diagnostic category for a particular set of symptoms. For example, the diagnosis of Alzheimer's dementia requires the presence of memory impairment as the one essential major factor. The diagnosis is then confirmed by the presence of a certain number of items from a list of minor factors. The factors can also be quantified depending on whether they are clearly present, doubtfully present, or absent. The numbers assigned to each factor can then be summed to provide a total score that can be used to assist decision-making. A number of these organizational tools (word logics, branching computer logics and factored decisional logics) will be used in this article. 13

3. Value theory. This is a consideration of the ends and goals of human behavior. It inevitably crops up in any difficult legal decision, especially in "hard cases" where Peter can only be paid at the expense

13. The underlying formal theories indicated here have been discussed more fully in J. Stanley McQuade, Medieval Ratio and Modern Formal Studies: A Reconsideration of Coke's Dictum That Law is the Perfection of Reason, 38 AM. J. JURIS. 359 (1993).
of Paul, and where any proposal has something to be said against it. These controversial matters commonly boil down to different perception of values. The conflict of opinion can only be resolved if some agreement is reached as to the nature and importance of the relevant values—a philosophical matter. If the notion of value is simply a dressed up version of “I prefer” (the emotive theory of value), then these arguments, and indeed most serious discussions, will go on forever unless or until the parties are somehow persuaded that it is in their common interest to take one side or the other. The other general option, that there are real values, is taken here to be the preferred view. I have argued this position elsewhere,\textsuperscript{14} but there is no need to do so here, since the main values involved in products liability discussion are neither abstract nor controversial (though their application may be problematical). These values may be conveniently divided into several groups as follows:

1. Values related to persons.
   a. Persons injured by defective products should be compensated.
   b. Producers should be encouraged to take measures to reduce the risk of harm to users.
   c. Users of products should be encouraged to adopt safe practices and so avoid injuries.

2. Societal values.
   a. The dollar costs of injuries (medical services, Workers’ Compensation, etc.) should be kept as low as possible.
   b. Loss to society of the services of injured persons should be reduced to a minimum.
   c. Ethical business operators and managers should be able to do their job without constant worry of possible litigation, i.e. focus on functioning rather than risk management.
   d. Producers should not be deterred from developing or marketing worthwhile products simply because they carry a high risk of litigation.
   e. Businesses should not be disadvantaged in exporting to foreign markets, e.g. the European Economic Community, where production costs are lower because the law there is more kind to manufacturers.

3. Legal values.
   a. The law should be clear and understandable, internally consistent, and capable of predictable application to cases.

\textsuperscript{14} “Marketing Natural Law” a completed paper currently being reviewed by learned colleagues with a view to publication.
b. The business community should be able to ascertain, in advance, their legal duties as to avoid litigation.

c. Litigation is to be avoided where possible.

d. If litigation proves necessary it should be handled efficiently, i.e., reducing expense, confusion, time wasting, and aggravation as much as possible.

e. Settlement is preferable to litigation, with summary judgment the next best option, followed by directed verdict, with a jury trial only when all else fails.

The items in this list will be used to evaluate existing law and proposed changes, acting as the goals that the law is intended to strive toward, and if possible achieve. The list is by no means to be taken as final, but only provisional—an opening gambit rather than an ultimate game plan. Different sets of objectives could be produced, adding or subtracting items from the above list. But no resolution of the endemic problems of products liability law can be achieved without clearly listing the agreed objectives to be achieved.

PART II—HISTORY - MODIFICATION OF OLD REMEDIES TO MAKE THEM FUNCTIONAL IN MODERN PRODUCTS LIABILITY CASES

§4 Reasons for the rather late development of products liability law

Liability for defective products, as was said earlier, is not new in the law. Provisions dealing with this subject can be found in every system of law going back through the Middle Ages to Anglo-Saxon customary law and even to ancient Middle East laws such as are found in the Code of Hammurabi.\textsuperscript{15} What is relatively new, is the variety of products and complicated ways of producing them that have made the older remedies ineffective. Yet although mass production and distribution have been with us for more than a century, most of the changes in this branch of the law have taken place over the last few decades and the development continues. There is usually some delay between need and remedy in the law, but this one seems rather long. A number of explanations for this tardiness have been given, all of them rather speculative. It has been viewed (dubiously I think) as capitalist class action with the views of the legal profession reflecting their class origins. It has also been explained in terms of economics, with the law valuing and protecting developing industry and trade, which were deemed vital.

\textsuperscript{15} Translation by L.W. King can be found on the Internet in the Avalon Project of Yale University Law School at http://www.yale.edu/lawweb/avalon/medieval/hamcode.htm. See also G.R. Driver and J.C. Miles, The Babylonian Laws (1952).
for the common welfare at the time.\footnote{See L.M. Friedman, A HISTORY OF AMERICAN LAW Ch. III (2d ed. 1995).} If this is the case, and it seems the most plausible of the proposed explanations, the prosperity of the sixties would represent the coming of age of industry and commerce, when they should be expected to pay for the harm that they produce. The recent, restrictive modifications may then be viewed as reflecting more difficult economic times, and the perception that too liberal and too easy recoveries have undesirable economic and social consequences.\footnote{See R.A. Epstein, CASES AND MATERIALS ON TORTS p.716 (7th ed. 2000). The comment of the cynical physiologist may be appropriate here, that all explanations are lies, but that some are more helpful than others.}

\section*{§5 The emergence of products liability as a distinct sub-category of the law}

Law does not develop by quantum leaps as a rule. It grows more like a tree with new branches sprouting from the old. Such has certainly been the case with modern products law. The older remedies, the actions in negligence, warranty and strict liability for dangerous entities, have all been worked over and adapted to meet present needs. Traces of these origins can still be seen in products liability remedies, but increasingly they are breaking loose from their roots, requiring that we treat them independently as new creations. And this view commands wide support. Indeed the mixture of older concepts with the emendations that have been made to them, has proved to be very confusing to courts and juries.

\section*{§6 Modification of the negligence action in products cases}

The action on the case for negligence was an adequate remedy for defective products in the days when items for sale were made in small factories or by individuals and purchased directly by the ultimate users. In addition, most articles were mechanically simple so that defects were usually obvious after an accident or even before it. The manufacturing and distribution processes and even the products themselves are now much more complex. Two major changes in the law of negligence were therefore needed before it could function adequately in products liability cases namely:

1. Relaxation of the requirement of privity. The (correct) notion that a specific duty had to be owed to the plaintiff by the defendant had developed in rather odd ways following the English case of Winterbottom v. Wright, decided in 1842.\footnote{152 Eng. Rep. 402 (Ex. 1842).} This may well have been a
Illustration 1: The Modification of Older Legal Remedies to Meet the Needs of Modern Products Liability Law.

case in contract but was interpreted, especially in the United States, as also applying in tort. Persons other than the original purchaser who

---

19. Assigning cases in the early nineteenth century to categories such as contract and tort, is difficult and at times impossible since they were brought, argued and decided under a particular writ such as trespass, trespass on the case, assumpsit, etc.
had been injured by a defective product were therefore not allowed to bring suit. A number of exceptions to the rule were gradually introduced especially in relation to food, poisons, and other products generally categorized as dangerous.20 In the landmark case of *MacPherson v. Buick Motor Co.*, Judge Cardozo relaxed this requirement generally and stated that the duty of reasonable care was owed by manufacturers of potentially dangerous products to all persons who were likely to use and be injured by them if they should prove defective.

2. **Relaxation of the requirements of proof.** Proof of negligent manufacture21 is almost impossible in modern production systems. The notion of "fault" has therefore been largely replaced by the more objective term "defect."22 The two words are not totally different since a defective product implies negligence somewhere in the manufacturing system; but it was hoped that the objective concept, defect, would be easier for the plaintiff to prove. However presence of defect can still be difficult to show, especially when the product is hopelessly damaged in an accident. Courts in many jurisdictions dealing with products cases, have therefore felt impelled to relax the requirement that the plaintiff shall prove zes23 case in every detail. Circumstantial evidence may be allowed to go to the jury in cases where the accident itself suggests a strong likelihood that a defect was present in the article when it left the control of the manufacturer/supplier.24 The expression, "res ipsa loquitur" is not heard much in recent products cases and may not even be allowable in some jurisdictions, but circumstantial evidence is commonly allowed to plaintiffs in cases where it would be difficult, if not impossible, to prove that there was something wrong in the manufacture of a product. A typical example would be the "pop bottle" case where a jury question may be raised by the fact of the bottle exploding spontaneously, if it can be shown that a similar explosion had occurred recently with another drink bottled by the same defendant.25 It should be noted that this relaxation of the require-

20. Huset v. J.I. Case Threshing Mach. Co., 120 F. 865 (8th Cir. 1903), which summarized the position in the United States at the beginning of the twentieth century.

21. Not negligent design or insufficient warnings/instructions which tend to follow the negligence model.


23. The "Z" gender-free convention has been used here. "Ze" replaces "he/she" and "zes" stands for "his/hers."

24. This rule is formally recognized in Restatement (Third) of Torts - Products Liability §3. Often referred to herein as (R3T-PL).

ments of proof by the plaintiff does not normally apply in design or warnings cases, being more appropriate to manufacturing defects.26

§7 Modification of the law of warranties in products cases - Express Warranties

Express warranties had virtually ceased to exist after King Edward I required that they be under seal.27 They were revived in modern products law with the holding that in certain circumstances, promotional materials such as commercial advertising and brochures, could create liability somewhat like an express warranty. This can happen in two ways.

They can be construed as specific undertakings relating to safety held out to the general public.28 So the slogan “completely safe, even a child could use it” may create liability. Since the action is in warranty and not in negligence, evidence of due care will be deemed irrelevant and excluded. Sometimes contributory negligence has not been allowed as a defense, but the general trend is to allow contributory fault to be considered in virtually all products liability cases, either to reduce or bar recovery.

Promotional materials can create liability by blunting the natural caution of the user (lulling them into a sense of false security). This happens, for instance, with vehicles designed for use in rough terrain, when drivers may conclude, after seeing the manufacturers’ brochures or videotapes that it is safe to drive down steep hills at high speeds.29

26. See §10 infra.

27. Born 1239, he was virtually king during the latter part of the reign of his doubtfully competent father Henry III. He was crowned in 1272 and died in 1307. King Edward was known as the English Justinian and some of his legislation (e.g. ch.1 of Statute of Westminster II - the famous de donis conditionalibus) is still law in England, America and other common law jurisdictions. He introduced the requirement for a seal in order to prevent doubtful claims based on express warranties that were then being brought rather frequently. Unfortunately the seal became uncommon and so the action died out. See T.F.T. Plucknett, CONCISE HISTORY OF THE COMMON LAW p. 366 (5th ed. 1956).

28. Baxter v. Ford Motor Co., 12 P.2d 409 (Wash. 1932), is the classic case where the manufacturer warranted that the car windshield would not shatter. Evidence of the superior quality of the glass compared to that of other suppliers was refused as irrelevant.

§8 Modification of the law of warranties in products cases—Implied warranties

The implied warranties of merchantability and fitness for particular purposes were taken from Roman law and incorporated into the English and American law of sales in the late eighteenth and early nineteenth centuries. The notion of fitness included that of safety, but recovery was first limited to purchasers in immediate privity with the seller. However, the landmark case of *Henningsen v. Bloomfield Motors, Inc.*, held that the Chrysler Corporation, though only contracting directly with the dealer, was responsible to the ultimate purchaser. In the Uniform Commercial Code (§2-313 through §2-315) liability beyond the original purchaser was contemplated and several alternatives (A, B and C) given to States adopting it. The alternative most commonly adopted is A, which limits liability to family and household guests. The manufacturer or seller is not allowed to disclaim this liability. Alternative B allows recovery by any foreseeable natural person (i.e. not a corporation) but for personal injuries only. Alternative C, the broadest of all, allows recovery even by corporations and includes damage to property as well as personal injury. The principal modification of UCC provisions as they apply in products liability cases are:

1. **Severe limitations on disclaimers.** Sellers are generally not allowed (under the unconscionability clauses of the UCC itself) to disclaim implied warranties when they relate to personal injury or property damage. The ability of suppliers to disclaim implied warranties has also been severely limited by federal statutes notably the Magnuson-Moss Act, that among other things will not allow suppliers to make any affirmative statements about their products if they are disclaiming the usual implied warranties (they cannot talk out of both sides of their mouth at the same time).

2. **Relaxation of the notice requirement.** Implied warranties under the UCC have proved awkward in products law because notice of any

30. This work was initiated by Chief Justice Holt and Lord Mansfield in the Court of King's Bench in London and later developed by Chief Justice Joseph Story, Chief Justice Lemuel Shaw of Massachusetts, and other distinguished commercial authors in America. Both Mansfield and Story were well versed in Roman Civil Law.

31. 161 A.2d 269 (NJ. 1960). Prosser describes this case as the point where the walls of the privity defense in negligence cases finally came down.

32. See UCC §2-318 Alternative A. In North Carolina, workers not covered by Workers' Compensation may also sue under the Products Liability Statute N.C. Gen. Stat. §99B.

defect must be given to the manufacturer within a reasonable period of time, which may be as little as six months following delivery. This is a very reasonable requirement between traders who complain about sub-standard goods, but six months is generally insufficient time to allow personal injury complaints to mature. The decision to seek compensation may properly be delayed beyond the commercially appropriate date and in many cases the injury will not be discernible or the resulting disabilities may not have become completed until several years after purchase. For example, a defective conducting rod may not be struck by lightning for many years after delivery. The requirement of early notice under the UCC has therefore been generally held not to apply in personal injury or damage to property (other than the goods sold) and the normal limitation period for torts actions is deemed to apply.

3. The privity requirements of the UCC. If one of the restricted privity options in UCC §2-319 has been chosen by the jurisdiction, privity requirements are not usually relaxed in products cases. Thus in the celebrated North Carolina case of Crews v. W.A. Brown & Son, Inc., the injured plaintiff did not satisfy the privity provisions of either the UCC or the Products Liability Act and so could not recover.

§9 Modification of the common law notion of strict liability - Restatement (Second) of Torts § 402A

The three causes of action just mentioned, namely negligence, express warranty and implied warranty, provide reasonable cover for products liability cases. Nevertheless, they had been developed, in a somewhat uncoordinated manner, from older remedies—a process that almost inevitably entails some confusion. The Restatement (Second) of Torts (R2, published in 1965, therefore provided a new remedy called “Special Liability of Seller of Product for Physical Harm to User or Consumer”. This section essentially provides that:

(1) one who is in the business and
(2) who puts into the stream of commerce a product that is
(3) defective and unreasonably dangerous
(4) is liable to the ultimate user or consumer
(5) for personal injury and property damage proximately caused by the defect
(6) without proof of negligence on the part of the supplier

35. N.C. GEN. STAT. §99B-1 et seq.

Published by Scholarly Repository @ Campbell University School of Law, 2002
(7) even though there was no privity between the supplier and the injured person, provided that
(8) the item is expected to and does reach the user without substantial change and
(9) is used as intended.³⁶

Although strict liability for defective products is often described as a new remedy it is actually an adaptation of an older remedy, the rule in *Rylands v. Fletcher.* ³⁷ In *Rylands,* strict liability was imposed on defendants for keeping dangerous entities (such as collections of water, dangerous animals or explosives) on their property exposing their neighbors to unreasonable risk of harm.³⁸ As with other older remedies, some changes were required for strict liability to work in the products field. These changes have not always been appreciated by courts applying §402A. For instance, the holding that ordinary fault on the part of the plaintiff was no bar to recovery in strict liability has been interpreted to mean that any evidence of user fault, other than assumption of the risk, was inadmissible in products cases.⁴⁰ This kind of thinking is now generally considered inappropriate. The other modification has been to remove the defense that the use of the product was considered normal for the area and circumstances in which the accident took place. If this facet of the rule were retained, one could not be held strictly liable for injuries due to the use of automobiles, since their use is normal in our society.

Restatement (Second) of Torts §402A was quickly and enthusiastically adopted by most jurisdictions in the United States. A number of good policy reasons seemed to support this wholesale adoption of the new rule. Defective products are almost inevitable in modern manufacturing, even when great care has been exercised by the producers and suppliers, and injuries arising from such defects are to be expected. It was thought that strict liability (the common name for

³⁶. Restatement (Second) of Torts §402A (1965).
³⁷. 3 H.L. 350 (1868).
³⁸. Rylands v. Fletcher, 3 H.L. 350 (1868), extended already existing strict liability for dangerous animals, explosives and poisons to unreasonably dangerous entities introduced into the defendant's land. This liability has been further extended to cover unreasonably dangerous activities off the defendant's premises (See R. § 519, 520), but very few cases have been litigated and even fewer have allowed recovery.
³⁹. "Ordinary fault" in the common law was defined as simple failure to detect the danger. See Butterfield v. Forrester, 103 Eng. Rep. 926 (reported in Prosser, Wade and Schwartz, TORTS: CASES AND MATERIALS p.586 (10th ed. 2000)).
⁴⁰. See Restatement (Third) Torts - Products Liability §17 cmt. a, for a full discussion of this issue which is now overwhelmingly decided in favor of applying comparative fault in strict liability cases.
liability under §402A), would make it easier for injured users to recover, and this in turn would motivate manufacturers to reduce risks as far as possible. Finally, it seemed clear that the cost of compensation could be covered by insurance and spread among users by the suppliers and manufacturers as part of the purchase price.41

§10 Second thoughts on §402A

Initially, the strict liability section of the Restatement (Second) of Torts seemed obviously fair to all parties and there seemed to be no difficulty as to how it should be applied. But problems soon began to appear and they have not gone away.

1. Insurance rates began to rise sharply. There has been a good deal of argument as to the cause, but some of the blame was attributed, rightly or wrongly, to strict liability provisions and they have come under attack from business interests. Large corporations are thought to have played a major role here, but the insurance burden has been hardest on the smaller manufacturers and suppliers, who represent a very large and politically influential part of the business community, and they have been able to make their objections heard.42

2. Probably more importantly, §402A has proved to be unclear as to its meaning. It has been interpreted in different ways in various jurisdictions.43 The difficult questions flowing from § 402A include the following:

a. Should the strict liability provisions of §402A apply only to manufacturing defects or to cover design and packaging defects as well.

It seems likely that Dean Prosser, the principal reporter, intended only manufacturing defects to come under this section with matters of design dealt with as ordinary negligence, but this was not made clear in the Restatement. The arguments in favor of limiting strict liability to

41. The policies supporting RST §402A have been enunciated and discussed in many cases. See Escola v. Coca Cola Bottling Co., 150 P.2d 436 (Cal. 1944) (Traynor, J., concurring).

42. The principal evidence of this is the “sellers exception” where the ultimate vendor is no longer liable under warranty without fault. This provision is included in §105.C of the Model Uniform Products Liability Act (MUPLA) and in the products liability reform legislation in most jurisdictions.

43. The great German jurist Christian Von Savigny would no doubt comment—from the grave—“I told you so.” Savigny was very doubtful of the ability of legislation to provide clear definitions and rules ex cathedra in new circumstances. He would have confined the province of legislation in civil cases to summarizing or perhaps clarifying judicially developed materials, and even here he preferred the authoritative text-book.
strict liability for defective goods

applied to all types of defect including defective design

unified test for defect - the "user expectation test"

assumption of the risk is a defense but the decision must be clearly unreasonable

misuse, alteration and abuse are defenses but may be foreseeable and thus create liability

since fault in the defendant is considered irrelevant, then the contributory fault of the plaintiff should be equally so if it falls short of assumption of the risk

illustration 2: expansive interpretations of Restatement (Second) of Torts §402A

manufacturing defects are listed by a number of learned authors who point out that:

http://scholarship.law.campbell.edu/clr/vol25/iss1/1
i. The design process is well documented so that fault can be found and clearly proved.

ii. Design defect cases, though costly to prepare and try, generally involve many plaintiffs with serious injuries so that expense is not a serious deterrent to bringing suit.

iii. Since a whole line of products is being considered, a design should not be declared defective without a good deal of thought. The merits and demerits of alternative designs should be weighed very carefully and all other options considered before consigning a design already in production to the scrap heap.

b. Should plaintiff fault be a defense?

It was argued, and some courts accepted the argument, that since negligence on the part of the defendant need not be shown, and due care on the part of the defendant is not a defense, then the plaintiff’s fault should likewise be irrelevant. This argument was considered doubtful from the beginning as it seemed designed to encourage user fault as a matter of public policy. Even when it was accepted, user fault tended to be viewed under some other heading, such as causation or misuse.

c. How do you decide when a product is defective?

The Restatement (Second) of Torts defines a defective product as one that does not perform as a reasonable user would expect. Some writers have described a defective item as one that a reasonable producer would not sell. There is probably no difference between these formulæ. The key term is the word “reasonable.” The reasonable buyer and seller, unlike the rest of us, must be superhuman, knowing all there is to know about the product and how it might have been properly designed, manufactured and packaged. The user expectations test, apparently a simple and even a lay notion, turns out then to be a rather complicated artificial construct, which is more likely to confuse than to help the jury. The ordinary reasonable buyer may be required to struggle with and attempt to understand all sorts of technical details concerning design, production and marketing before deciding whether a product is defective or not.


45. Id.
ACCIDENT CAUSED BY DEFECTIVE ARTICLE

- Article available
  - Item is as intended
    - NO MANUFACTURING DEFECT
  - Item not as intended
    - Circumstantial evidence of defect will be refused
      - NO LIABILITY

- Article not available
  - Loss due to plaintiff fault
    - Circumstantial evidence of defect may be allowed
      - POSSIBLE LIABILITY
  - Loss not due to plaintiff fault

- Manufacturing defect
  - Testing adequately performed
    - STRICT LIABILITY
  - Sampling in place and adequate
    - LIABILITY IN NEGLIGENCE
  - Testing absent or inadequate
    - Sampling absent or inadequate

Illustration 3: Liability for Manufacturing Defects
PART III—THE EMERGING CONSENSUS IN MODERN PRODUCTS LIABILITY LAW

§11 Objective definitions of defect - Uniform Products Liability Act and Restatement (Third) of Torts

The conceptual problems just mentioned have not eliminated the use of the Restatement (Second) Torts §402A, but they have significantly reduced the boundaries of its operation. It continues to function reasonably well in manufacturing defects cases (where it was hardly needed in the first place, since defect here normally implies fault somewhere). But it is not apt for use in design and warnings defects that inevitably sound in negligence. Relics of its expansive phase, when it was extended to cover all products cases, remain here and there, but they are like the shattered fragments of Ozymandias' statue in the desert sand, the remains of former glory. Lip service may be paid to it in a statement of claim or judicial opinion here and there, but it has been largely replaced by an emerging consensus of authorities and jurisdictions on products liability that has developed over the last several decades. Even where it is still used it has been interpreted out of existence. The judge will say “strict liability is the law in this jurisdiction; but so far as defective design or defective warnings are concerned it means —(and a statement sounding largely in negligence follows).”

The new thinking can be seen in the Model Uniform Products Liability Act (MUPLA) and in the Restatement (Third) of Torts on products liability (R3T-PL). Neither of these two influential publications even mentions such terms as negligence, warranty or strict liability. They link liability to one of two things—either to representations


47. This is not to say that §402A is worthless. The comments contain valuable materials, still much quoted as authorities.

48. See Henderson & Twerski, supra note 11, at 447. A review of the law in various jurisdictions can be found in the Restatement (Third) Torts - Products Liability §2 cmt. d.

49. Produced by a federal interagency task force established by the Ford administration and chaired by Professor Victor Schwartz. Its report was published in November 1977.

50. Published in 1998 by the American Law Institute. The reporters were Professors James Henderson and Aaron Twerski, both recognized authorities in the products liability field.
made by the defendant or to a defect of some kind in the article sold. No attempt is made to define "defect" in general terms. In place of a single overall notion (the reasonable user test), particular objective definitions are supplied for each of the three (or four) types of defect.

§12 Types of defect

Defects are divided into manufacturing defects, design defects and packaging defects. Each of these must be described in some detail.

1. Manufacturing defects

Manufacturing defects are defined as those where the product was not made as designed—a bolt was left out, substandard materials were inadvertently used or some of the components accidentally mismatched. A second method of defining a manufacturing defect is where the item in question does not match the others in the same product line. The first definition is preferable, although it may be simpler in some cases to show variance from the blueprint by comparing the defective article with normal products made from the same design. Defects of this type may be obvious even to the layperson, but in catastrophic accidents it may be difficult, or even impossible, to determine if the defect caused the accident or the accident caused the defect. In such cases rather loose circumstantial inferences may be allowed. So when a recently purchased car swerves suddenly off the road in good driving conditions without any suggestion of driver fault, the jury may be allowed to conclude that the automobile was somehow defective, even when severe damage removes any hope of showing a faulty part. This is sometimes referred to as the "malfunction" rule.

2. Design defects

A design defect is defined and proved by showing a safer, feasible, alternative design. Proving that a better design is possible is not an easy matter. It is not enough to show that the item could have been designed in a way that would have prevented a particular accident.

51. Liability for representations made is still termed express warranty, though this may require rethinking due to the fact that such representation can create liability in other ways, such as inducing carelessness in the user.

52. The fourth being liability under express warranty which features in MUPLA but is largely ignored in R3T-PL.


54. See Restatement (Third) of Torts - Products Liability §3 (1998).

55. See Restatement (Third) of Torts - Products Liability §2(b) (1998).
Illustration 4: Liability for Design Defects
The crucial term here is feasible and feasibility has a number of components.  

a.  It must be possible to build the new features into the design with currently available materials and technology.  

This requirement is sometimes difficult to define precisely, but three basic methods are used which are described in order of preference.

i.  If the proposed better design is already incorporated in comparable products little argument can be made about whether it is feasible or not. In fact, a showing of this kind is likely to raise a strong presumption of defective design, which must be rebutted to avoid liability.

ii.  If a safety device or feature is available so that it might have been incorporated into the design, the proposed safer design was arguably feasible. However, the argument is not quite so strong as in item i. supra, since the new device may have unsuspected adverse effects when incorporated into a product for the first time. The inference of feasibility may therefore be rebutted by pointing out this fact, and by documenting some of the unwanted effects that might occur if it was used in this unprecedented way.

iii.  The third and weakest form of feasibility argument is to show that a safety feature could be produced and incorporated into the design using available technology even though no one has actually done so. This is open, a fortiori, to arguments that it might not function as hoped within the proposed new design, the new device might not perform up to expectation, or may have nasty, unsuspected drawbacks of one sort or another.

b.  The redesigned item should perform reasonably well.

Ideally, it should equal or surpass the performance of the unsafe model that it is intended to replace. For instance, a flexible wheel cover to keep mud off the brakes in a heavy earthmover may be desira-


57. This gives rise to what is known as the “state of the art” defense. Some writers, and a few jurisdictions, have taken the position that an article is just as defective and just as dangerous if it lacked a safety feature known at the time of the accident, even if this was not available at the time of manufacture. This form of strict liability has generally been rejected as going beyond strict to absolute liability. See Restatement (Third) of Torts - Products Liability cmt. d. (1998).

58. Such cases would almost certainly be settled. If contested, it will be argued that the model shown with the safety feature already included is not really comparable to the one in dispute, being more expensive or designed for a different purpose or with some other differentiating characteristic.
ble, but if, with currently available materials, it cannot withstand the heat of the brakes, the improvement is a futuristic dream, not a feasible alternative design. Similarly a wire cover over a propeller in a fishing boat may prevent it from wounding fishermen who fall into the water, but if it produces so much drag that the boat will be very slow and have very high gas consumption the alternative is not feasible.  

c. *The changes should not be too costly.*

A completely crash-worthy car could probably be produced but the suggested design will not be considered feasible if it would price the vehicle beyond the pocket of all but the very rich. Cost considerations, of course, must be related to the nature and purchase price of the article: an increase of a hundred dollars may be trivial in an automobile but out of the question in a domestic kitchen item such as a mixer. Cost effectiveness must also be related to the quality of the item. Most articles, including cars, come in several qualities with price tags higher on those at the upper end of the market. The level of safety design will always have a general minimum standard, but beyond this point improvements should not be allowed to price the item beyond the purchasing ability of all but the wealthy. A luxury Cadillac and a Ford car at the lower end of the price scale are not comparable items.

d. *The new model should be reasonably acceptable to purchasers.*

It is not sensible to insist on a product that most users dislike or find disagreeable. They should, in time at least, come to like the improved product as well as or better than the older item. A safer cleansing cream that smells peculiar or causes a burning sensation in the skin will hardly be considered a feasible alternative product to one that has potentially allergic ingredients but is effective and agreeable to the users.

e. *The alternative design should not create new dangers that might be just as bad or worse than the old ones.*

To replace one dangerous design with another would be "out of the frying pan and into the fire." Salk polio vaccine employs killed virus and so does not cause the rare case of polio infection that is associated with live attenuated (Sabin) virus. It can, however, cause a rare but devastating encephalitis and so is not really any safer than the Sabin vaccine.  

---

60. This point was overlooked by the court in Reyes v. Wyeth, 498 F.2d 1264 (5th Cir. 1974), where a little girl contracted polio following ingestion of oral vaccine. The manufacturers objected that the parent of the child had no reasonable alternative during a polio epidemic so that a warning about the remote possibility of contracting the disease from the cure was irrelevant. The court (introducing its own researches
It is clear from the above considerations, that even designing for safety alone may be very difficult and involve trade-offs and choices that are not easy for lay persons to understand. It has been argued, by Professor James Henderson and others, that design cases, where the ultimate design was deliberately selected after considering the pros and cons of the alternatives, are not suitable for submission to a jury. The fear is that, being unable to understand the design arguments of the experts, the lay jurors may make their decision on some other grounds, such as who seemed the best expert, whether they liked the plaintiff or not, and (apparently a most important factor) how badly the plaintiff was injured. A number of highly respected judges have been impressed with this argument but few, if any, have felt free to go along with it.

What has been done, however, is to require that plaintiffs in design cases prove their case and really show alternative feasible safer design. The Daubert criteria for expert testimony should also work to the same end, excluding partisan experts who might be hired to testify for or against a particular design (junk science). Trying design cases properly in this way usually requires a number of experts and is therefore extremely expensive and work-intensive, which effectively bars the claims of all but the most severely injured whose recovery would justify the expense. It has, however, the advantage that once accomplished, the result can be used as a pattern and an incentive to settle other cases where people or property have been injured by the same design.

§13 Packaging or marketing defects - defective warnings and instructions

The term "packaging defect" is unfortunate since it suggests that there is something wrong with the wrappings, bottles or containers in

---

without cross-examination by counsel or benefit of expert opinion) noted that the Salk vaccine was available, that it avoided the risk of infecting the patient and that the parent might have decided to prefer it. The risk of encephalitis from the Salk vaccine was not mentioned.

63. See Daubert v. Dow Merrell Pharmaceuticals, Inc., 509 U.S. 579 (1993). Here the Federal Rules of Evidence were declared to replace the older Frye criteria (acceptable to a respectable body of scientific opinion) with the rule that the court had to find proposed expert testimony both relevant and reliable before it could be presented to the jury.
Illustration 5: Liability for Warnings/Instructions Defects
which the product is packaged. A packaging defect in the products liability context means that there is something wrong with the warnings and instructions accompanying the article. A packaging defect exists when:

1. There is a non-obvious danger, AND
2. There is either no warning (or safety instructions) at all, OR
3. More adequate warnings (or safety instructions) could and should have been provided that would have prevented or reduced the severity of the harms.

A packaging defect is proved by demonstrating that a more adequate warning of the non-obvious danger was reasonably feasible. This is similar (though easier and less expensive in practice) to showing a safer alternative feasible design. The general rule is that when warnings are appropriate they should be communicated directly to those most in need of warnings, the foreseeable actual users. An exception occurs when an intervening person (the responsible intermediary or the learned intermediary) has the duty to pass on and interpret any warnings and instructions that have been provided. This commonly occurs in medical practice where warnings about medications are supplied to the prescribing physicians who are expected to interpret them to the patients. It can also be found in the work setting, where employers, or their safety officers, may have the duty of passing on warnings and safety instructions to employees.

However, an exception to this notion will be recognized and the learned intermediary defense will not be available when:

1. The danger to the ultimate user is great, AND
2. The intermediary may fail to perform their duty, AND
3. It is feasible to provide a warning directly to the ultimate user.

The first two conditions are usually present in every case, since the case would hardly arise unless the danger was considerable and all intermediaries, being human, are fallible. It is therefore clearly ones duty to deliver warnings/instructions to the ultimate user in every case where it is reasonably feasible to do so, e.g. by embossing them on the article or in some other way.

64. Sometimes also termed a “marketing defect.”
65. See Restatement (Third) of Torts - Products Liability §2(c).
66. See Restatement (Third) of Torts - Products Liability §6(d).
67. All sorts of persons may act as a learned intermediary, as where the manufacturer of ski bindings would be required to depend of the renter of the ski equipment to make sure that the bindings matched the ski boots. See Persons v. Salomon N. Am., Inc., 265 Cal. Rptr. 773 (1990).
Illustration 6: Adequate and Inadequate Warnings and Accepting the Obvious Danger Rule

§14 Packaging defects - adequate and inadequate warnings

Warnings and safety instructions must be distinguished from instructions for use. Warnings spell out danger and safety instructions tell you how to avoid the danger. Ordinary instructions are merely directed towards effective use.

Warnings/instructions, if given, must be adequate. A cursory statement such as “use only as directed” will not normally be suffi-
cient. If there is a danger, then the nature of the danger, its magnitude, and the measures to be adopted if the danger materializes must all be clearly communicated to the user in order to constitute a sufficient warning. The nature of a sufficient warning is perhaps best treated by discussing some well-known rules.

1. **No need to warn of what everybody should know.**

This rule is based on a sound principle, but unfortunately it is not always clear what everyone may reasonably be expected to know. Common knowledge varies with time and circumstance. It also varies with the qualifications of the person. Experts are expected to know a great deal more than ordinary users; for example a miner does not need to be warned of the dangers of dynamite. The non-expert is more problematic; there is some difficulty in determining how much knowledge a visitor from a foreign country, or one with diminished mental capabilities is presumed to have.

2. **No need to warn of what the plaintiff actually knows.**

Here again we have an obviously sound principle, but the reasonable person is allowed to have lapses of memory—for even Homer nods off sometimes (*etiam Homer nodat*).\(^68\) Conflicts between these two opposing principles can produce differences in rule application. If someone can forget what ze know they can also forget the warning, but a warning might jog the memory and prevent an inadvertent slip. Consequently it may not be pointless to display a warning on the product, even if it is something that many or most people know.

3. **No need to warn of obvious dangers.**

The first element in defining warning is usually the requirement that the danger be non-obvious. The obviousness of a danger has been used as an affirmative defense in design defect cases. The purchaser or user of a punch press, which is clearly without safety devices, cannot complain if they get their hand crushed in the machine. But here too it must be remembered that the reasonable person can reasonably forget. This rule must then be balanced with the next one that shows the close relationship between packaging and design defects.

4. **Good warnings do not excuse bad design.\(^69\)**

\(^68\) A medieval maxim deriving from some very peculiar passages in the *Iliad*, which were most likely due to transcription errors rather than inattention on the part of the poet.

\(^69\) This rule is relatively new and has not been ruled on in many jurisdictions, but it is obviously reasonable and has been firmly approved and adopted in several important cases as well as by most commentators. See Uloth v. City Tank Corp., 384 N.E.2d 1188 (Mass. 1978); Eads v. R.D. Werner Co., 847 P.2d 1370 (Nev. 1993); Restatement (Third) of Torts - Products Liability §2 cmt. l.
Illustration 7: A More Current Version of Warnings Defects

It is easier to add a warning than to redesign for safety. However, warnings are much less effective in preventing accidents than safety devices. Manufacturers therefore may still be held liable, despite ade-
quate warnings, if a feasible design change would have made the product safer. The manufacturer’s duty is first to design well, and then to warn of latent defects that cannot reasonably be designed out.

5. **Warnings must be prominent, legible and understandable.**

Warnings do not provide adequate notice of danger if they are tucked away in the depths of a brochure in small print. The more serious the potential harm, the more important it is that the warning should be calculated to come to the notice of the user. This requirement is subject to the qualification of reasonableness, which is especially important nowadays since the increase in the bulk of warnings/instructions has made it harder, perhaps even impossible, to warn effectively.

6. **Warnings will be presumed to have been read.**

The manufacturers’ duty to provide warnings is matched by the users’ duty to read them. Normally manufacturers are allowed to assume that the user will read and follow the warnings and safety instructions that they have provided. If, however, the manufacturer or supplier has notice of the likelihood that the product will come into the hands of illiterate or foreign users, then the manufacturer may have a duty to take reasonable measures to inform such persons about the danger. For example, a supplier of a toxic fertilizer was deemed to have notice that migrant workers who did not understand the English language might not be made aware of the dangers of their product and be harmed by it. A duty arose to warn of the danger and how to avoid it (by wearing a face mask). In such circumstances, internationally agreed upon standard warning symbols may be helpful. 70

7. **Warnings must be specific as to the nature of the danger.**

A warning should not only apprise users of the danger but also make them aware of its type, magnitude and urgency. A warning that a vapor may be harmful in a poorly ventilated room will not be sufficient if the truth is that quite small concentrations of it can explode or cause liver toxicity or some other serious medical problem. 71

8. **Multiplying warnings diminishes their effect.**

This is sometimes expressed in the comment that “warnings are not free.” It may cost only pennies to print an additional warning on a label or package, but there can be other costs. Every additional warning dilutes and diminishes the effectiveness of the previous ones, until eventually they have little or no effect at all. This principle is seen in

70. See Warren A. Seavey, Negligence - Subjective or Objective, 41 Harv. L. Rev. 1 (1927).

71. This is probably the most common ground for determining that warnings are insufficient. See e.g., Tesmer v. Rich Ladder Co., 380 N.W.2d 203 (Minn. 1986).
drug manufacturing, where if more than a few episodes of a particular complaint are associated with a product, whether the drug is known to have caused them or not, the manufacturer may feel obliged to list that complaint as a possible side effect of the drug.\(^72\) It is not hard to see that if a drug has been on the market for any length of time its warning list is likely to become somewhat long and rather non-specific. It is argued that a shorter list of the most likely problems would be more helpful to the users. Allergy warnings are particularly troublesome in this regard. Formerly an allergy was regarded as a defect in the user rather than in the product. More recently manufacturers have been held liable for not warning of possible allergic effects when they are very common or even when they are rare if they are very serious.\(^73\) This means that an allergy warning must appear on virtually every drug package insert, since anything can cause serious allergic problems to some person somewhere. It does not make much sense then to put an allergy warning in the list of possible side effects of a drug. A more helpful approach is to list any ingredients that are known to cause allergic reactions: persons who are allergic to these substances may then be able to avoid them. Nitrites, used as preservatives in restaurant salad bars are a good example. They can, when ingested, cause fatal anaphylactic reactions in some people and it is very desirable that such people should know if nitrites have been used in the preparation or preservation of a food item. Similarly most of the serious skin reactions to creams and rinses are caused by approximately fifteen naturally occurring substances used as preservatives, spreading agents or emulsifiers.\(^74\) It makes sense to notify potential users if these substances are present in cosmetics. It does not make sense to put a blanket warning on every product that it may cause serious allergies.

\(^{72}\) There is no fixed number of adverse reports that will require a warning. However, the litigation-averse drug manufacturer will rather quickly consult with the FDA about including a warning in the package materials.


\(^{74}\) Lists of common allergens are published by the prestigious North American Contact Dermatitis Group (NACDG), representing experts in this field in the U.S. and Canada. They have also developed diagnostic kits for detecting these allergies.

§15 Residual clause - some other topics in products liability

There are a number of other items that normally appear in texts dealing with products liability. Some of these represent interactions with other areas of the law, such as workers' compensation or corpora-
tions. It is outside the scope of this article to deal with them in any detail, but a brief list with limited discussion follows.

1. **Liability for used goods.**

   The general rule here is that there is only liability for actual negligence, especially if the article is sold "as is." 75 Actual notice of a defect may create the duty to inform the purchaser, especially if it relates to safety. A duty to inspect for defects may also create liability. If the article is advertised as "reconditioned," some jurisdictions will hold the seller liable as if it were new, while others, more kindly to the seller, will only apply the warranty of merchantability (and safety) to any new parts installed as replacements. 76

2. **Liability of assemblers and suppliers of components.**

   Assemblers of articles are liable for all defects in the product as it leaves their hands even if the defects were in component parts, such as tires, supplied by someone else. The manufacturers and suppliers of defective components are liable to the assembler and can also be directly sued by the plaintiff in negligence, but only in negligence since strict liability does not usually apply to component parts. Component-related defects can occur when there is nothing wrong with the component itself, i.e. it is only dangerous because of the way it functions in the assembled product. For example, brakes of a particular type may not be suitable for the vehicle in which they are installed. The component suppliers are only liable in these circumstances if they were involved in the design of the final product. 77 Liability of the component supplier will depend on a number of factors:

   a. Whether or not they had notice of the use to be made of their component.
   b. Whether consultation had taken place between the component supplier and the assembler.
   c. Whether there was notice that the assembler was relying on the advice of the component supplier.
   d. The relative expertise of the final assembler. Even though consultation has taken place and advice sought and given, the expert knowledge and experience of the assembler may supersede and insulate the component supplier. 78

75. *See* Henderson & Twerski, *supra* note 11, at 110.
76. *See* Restatement (Third) of Torts - Products Liability §8.
77. *See* Restatement (Third) of Torts - Products Liability §8(b).
78. *See* Verge v. Ford Motor Co., 581 F.2d 384 (3rd Cir. 1978). The factors which may create liability for a components supplier are clearly listed and discussed in this landmark case.
Factor based decisions, such as the one just mentioned, can be assisted by logical devices. The factors can be number-weighted on a scale of “0-1-2” depending on whether they are absent, doubtfully present, or definitely present. If the component supplier simply forwarded the parts requested the total score would be “0” and would indicate no liability. If the assembler did not know whether or which component would work in the final product and asked the supplier to advise and recommend, the score would be “2.” The minimum summed score would be 0 and would indicate no liability on the part of the component supplier. The maximum summed score would be 8 and the component supplier would probably be liable as a matter of law. Scores in between these extreme numbers would at some point, perhaps from “3” to “5,” raise a matter upon which reasonable persons might differ, i.e. a jury question.

3. **Liability of those who endorse products.**

Organizations such as Good Housekeeping and Underwriter’s Laboratories can be liable only for negligence, e.g., inadequate testing. They can also be liable for failure to test since this may amount to misrepresentation; they did not test as they represented themselves to have done. Celebrities who promote a product endorse it in a manner of speaking, but are not generally held liable for its defects. The rationale for this holding is probably that the public is deemed aware that these celebrities know nothing about the product and are merely selling their name for a fee. Franchisers and licensors who allow their name or trademark to be associated with a product may, however, be liable in warranty or in strict tort for the products and enterprises which bear their name on the ground of apparent authority—they seem to be the owners and may be estopped from denying it.

4. **Liability of publishers.**

Publishers and booksellers are generally not liable for defective products advertised in their magazines, or for harmful recommendations in the text. The analogy to freedom of the press has been mentioned in justification of this rule, but the principle involved here really has nothing to do with defamation or the right to free speech. It relates to the difficulty that it would cause publishers if they had to perform an accuracy check on every advertisement and statement made in their books and magazines.

---

80. See Henderson & Twerski, *supra* note 11, at 104.
81. See Winter v. Putnam, 938 F.2d 1033 (9th Cir. 1991).
82. The presence of actual knowledge of falsehood on the part of the publisher raises interesting and difficult questions which are beyond the scope of this article.
5. Liability of successor corporations.

By taking over an existing company, one may thereby unwittingly become the defendant in a products liability suit that had not been filed at the time of purchase. Two competing policies are at work here. On the one hand, it does not seem proper that injured users of these products should have no recourse when the original manufacturer fades from the scene. On the other hand, discouraging the purchase and take-over of companies would have serious economic consequences, including the fact that a number of them would go into bankruptcy and be unavailable for suit anyway. There are some exceptions that considerably reduce the scope of this rule. The successor corporation will be held liable when:

a. The purchasing corporation has expressly or impliedly assumed the seller's liability.
b. When the consolidation is deemed a merger.
c. When the purchasing company is considered to be a continuation of the original manufacturing corporation.
d. When the purchase is fraudulent and aimed at avoiding liabilities. 83


The liability of the insured employer is limited to the amount imposed by the Worker's Compensation statute. Attempts to circumvent the exclusivity of these remedies may be made in a number of ways.

a. The injured worker may sue the employer outside the workers' compensation provisions for an intentional tort. This will normally mean that the employee forfeits the no-fault workers' compensation, but recovery is then not limited to the workers' compensation amount. Some jurisdictions will allow the injured worker to bring suit against their employer where the latter has been found not merely to be at fault but to have shown gross fault amounting to recklessness. 84 Most jurisdictions, however, will discourage this exception, in some cases to the point of making it impossible to show intent. 85 Others allow the action but distin-

83. See Leannais v. Cincinnati, 565 F.2d 437 (7th Cir. 1977).
85. See Johns-Manville Prod. v. Superior Court, 612 P.2d 948, 953 (Cal. 1980), where the employer knowingly withheld information about an unsafe working
guish the requisite "recklessness" shown from even extreme negligence. The employer must have knowledge amounting to substantial certainty that injury is likely to occur yet still going ahead in callous disregard of the danger threatening the worker.\textsuperscript{86} Some limitations on the right to sue the employer for intentional harm have been included in Tort Reform Statutes. These formulations have survived constitutional challenge in some jurisdictions and been struck down in others.\textsuperscript{87}

b. The worker may also sue the supplier of defective machinery that caused the injuries. This third party may then attempt to obtain contribution from an employer whose negligence substantially contributed to the harm. The general rule is that contribution in these circumstances is not permitted.\textsuperscript{88} The need to maintain the exclusivity of the Workers' Compensation system will outweigh the interest of the third party supplier.

c. The employer may also "step outside" Workers' Compensation immunity by becoming a manufacturer and supplier to its own business (the "dual capacity" doctrine). To become liable the employer must manufacture equipment as a separate enterprise. Manufacturing machinery for use in one's own business is not enough. Recent case law has tended to severely limit the dual capacity doctrine and some would even doubt its continued existence.\textsuperscript{89}

Another controversial area in Workers' Compensation is the application of the collateral sources doctrine in lawsuits by workers against third party suppliers. Traditionally this has been regarded as a benefit that workers have provided for themselves, and which should not be used to reduce their recovery. One exception to this is that insurance contracts normally have a subrogation clause that allows the insurer to

\textsuperscript{86} See Henderson & Twerski, supra note 11, at 46.

\textsuperscript{87} The West Virginia Legislature defined "intentional" for purposes of workers compensation as acting "with a consciously, subjectively and deliberately formed intention to produce the specific - injury or death to the employee." W. Va. Code \textsection{23}-4-2. See Henderson & Twerski, supra note 11, at 47, for discussion of this battle between legislatures and courts.

\textsuperscript{88} New York is the main if not the only jurisdiction that permits third parties to obtain compensation or indemnity from employers. See Henderson & Twerski, supra note 9, at 53.

\textsuperscript{89} See Henderson & Twerski, supra note 11, at 49.
claim from the third party recovery, any amounts which they have paid to the injured worker. Recent reform proposals, including those of MUPLA, have tended to view the collateral sources rule as a fiction with the reality being that the worker is being compensated twice for the same injury. Some jurisdictions will allow the third party supplier to deduct the amounts already paid to the injured employee under workers' compensation. A tiny minority rule, only followed at present in California and North Carolina, will allow deduction of the Workers' Compensation amount by the third party defendant when the employer has been at fault. This appears to be punishing the employee for the faults of the employer, but a more complex rationale may be at work. The subrogating insurance company is being penalized here and presumably will raise the insurance rates of the negligent employer.

**PART IV PERSISTING PROBLEMS IN PRODUCTS LIABILITY LAW**

§16 Problem (1) - Fitting the modern notions into traditional remedies

Modern products liability law, as was noted earlier, was created by adapting older remedies to modern circumstances. This produced a number of causes of action covering the same kinds of cases. In practice there was little difference between these remedies. Implied warranty of safety, suitably adapted, can operate much like strict liability, and there is very little difference, if any, between negligence and strict liability for design defects and failure to warn. But the continuing presence of these various remedies in jury instructions can lead to confusion in the minds of jurors who have been known to reach inconsistent verdicts, e.g., finding no defect in a product and yet holding the seller liable in negligence or warranty.

One of the most important goals in court procedure is to make the issues being presented as clear as possible to jurors. It is therefore good policy to avoid vagueness and confusion in jury instructions as much as possible. The "modern" version of products liability does this by ignoring the rather general notion of defect based on the user expectation test that is found in Restatement (Second) of Torts. This is replaced with a list of several different kinds of defect (manufacturing, transportation, etc.).

90. It is interesting that insurance providers have been willing to accept this, apparently because the transaction costs of pursuing subrogation recoveries have reached the point where the value of the effort is questionable. See Report of the Interagency Study on Products Liability, published at 44 Fed. Reg. 62714 (1979).
91. See Henderson & Twerski, supra note 11, at 55.
design and warning defects) each of which is proved by showing certain objective elements. The action in negligence is not abolished, but is reserved for those cases where actual fault can be shown on the part of the supplier. The action in express warranty likewise remains, either as a matter of contract or if the user is led to behave incautiously by promotional materials, as tortuous misrepresentation. There is now no good reason to continue to use multiple overlapping remedies and when their use is often confusing. However, getting rid of these historical anomalies has proved difficult; they are entrenched in case law and in some cases are statutory. Replacing them can be like unscrambling eggs. There is no simple solution to this problem but some options are worth considering. The rational choice between options may of course indeed vary by jurisdictions.

In the few states that have not adopted § 402A, there should be no serious problem. If the case arises from a manufacturing defect, one can simply take the traditional remedy and add an interpretative note to the effect that negligence will be shown by deviation from intended manufacturing standard. The cause of action would then be described as negligence by reason of defective manufacture, and negligence would be presumed on the showing of a defective article. The causes of action in implied warranty can be dealt with in the same way. The action under an express warranty should likewise create no difficulty. The warranty may be proved using promotional materials either to show a specific warranty, or to imply that it is safe to use the article in a certain (dangerous) way, which is a kind of express warranty anyway.

In states where § 402A was adopted judicially there should likewise be no significant problem. Indeed many if not most of these jurisdictions have already taken care of the matter. It is not even necessary to reverse the prior decision to adopt strict liability, it may simply be reinterpreted. A common formula is to say that strict liability for design defects is proved by showing an alternative safer feasible design. This is usually followed up by lip service to §402A, commenting that this reinterpretation is not a return to negligence doctrine, since the focus is on the defective article, not on the person or persons who produced it. The same procedure can be used to redefine packaging (warnings) defects. No significant change is required for manufacturing defects since strict liability was originally designed for these and functions reasonably well in this kind of case. The only real change is to avoid the "user expectation" test and state that a manufacturing defect is shown either by comparing the defective article with the blueprint or other normal items from the same production line.
In states where § 402A was introduced by statute, the problem may be more serious. Reversing the original statutory enactment may be viewed as a political act aimed at favoring manufacturers and adverse to the interests of users. It is very doubtful that strict liability under §402A has made any difference to recoveries by users and has only served to confuse the law, but political interests may view the matter otherwise. This being so, statutory replacement may be a slow and difficult route to travel. It may indeed be easier to reinterpret the statute judicially along the lines suggested above, as most courts have already done. The transition to modern notions can also be accomplished by focusing on the "unreasonably dangerous" part of the §402A formula, comparing alternative designs to see if they provide a safer feasible alternative.

One persistent statutory problem relates to the use of the implied warranty provisions of the Uniform Commercial Code to deal with products liability cases. The cause of action based on the UCC implied warranty of merchantability (§2-314) has been an important remedy in the past, and details of the management of products cases using the UCC are well established. If there is personal injury or damage to goods other than the item sold, then there is a products liability suit. If the damage is only to the item sold, then the problem is merely commercial in nature. This is a simple and workable rule of thumb. Unfortunately a great deal of other confusing legal material has grown-up around the use of the UCC in products cases, introducing all sorts of issues from user fault and privity to periods of limitation. These confusions and complications were well exemplified in the case of Denny v. Ford Motor Co., where the jury, probably confused by multiple instructions in various causes of action, brought in clearly inconsistent verdicts. The late Professor Gary Schwartz, a major player in the development of the Restatement (Third) of Torts, wrote to Professor Richard Speidel, reporter to the drafting committee on Article 2 of the UCC, suggesting that bringing products liability law in the various jurisdictions into line with modern notions would be easier if the UCC would either exclude any application to personal injury cases or alternatively, include a statement representing modern products law in the text of the UCC itself. Neither of these alternatives has proved acceptable to the UCC drafters, who argue that some (very few) states depend largely on the UCC remedies in products cases, effectively

93. Denny, 62 N.E.2d at 730. See also Crews v. W.A. Brown & Son, Inc., 106 N.C. App. 324; 416 S.E.2d 924 (1992), where similar confusion may be found.

94. Professor Schwartz's letter is reproduced in the teachers manual of Henderson & Twerski, supra note 11, at 243.
using them as a form of strict liability. Four alternative suggestions are made here, in increasing order of likelihood.

1. The UCC could exclude the use of the Code in products cases.
2. The UCC could include a set of modern products provisions for states to adopt.
3. States could act on their own, amending their version of the UCC, to adopt either option 1 or 2.
4. State courts could reinterpret the UCC formulations bringing them in line with the objective notions of MUPLA and Restatement (Third) of Torts - Products Liability.95

Until something along these lines is done, the multiple competing causes of action, which exist at present in most jurisdictions, will continue to cause confusion and produce results which are either inconsistent, unjust, or both.

§17 Problem (2) - Establishing liability in the chain of distribution

Retailers have traditionally been held liable to the immediate purchaser for defective products under UCC 2-314 (the implied warranty of merchantability). The justification for this practice was that it relieved the injured plaintiff of the difficult task of finding all the appropriate defendants. It seemed simpler, and fairer for the local merchant, who after all had profited by the sale of the goods, to “vouch in” the wholesaler who in turn could involve the manufacturer or other supplier. Currently this system is viewed as unnecessarily roundabout and hard on the local merchant who, besides suffering considerable annoyance and stress, is put to the expense of obtaining legal counsel and may even lose reputation locally as the result of the trial. The current trend in most jurisdictions is therefore to make the wholesaler and local merchants immune from suit (absent their own fault) and compel the plaintiff to proceed directly against the manufacturer.96

This immunity may however be lost in a number of circumstances:

95. This kind of interpretative problem can be expected to arise if, and perhaps when, the new American Products Liability materials begin to be cited in jurisdictions where the European Community Directive on Products Liability has been adopted by statute. There is considerable support, especially among judges, for the more usable objective definitions of defect that these sources contain. They appear to be in direct conflict with the “user expectation test” of the EEC directive. But they could be incorporated into the EEC provisions, as American jurisdictions have done, by saying that the reasonable user would not purchase an article which had manufacturing, design or warning defects, and going on to define these in objective terms.

96. See MUPLA §105 and N.C. GEN. STAT. §99B-2.
Illustration 8: The Ultimate Seller's Exception to Liability

1. When the wholesaler or merchant is not a mere conduit but assembles, tests or in some other way becomes responsible for the product.

2. When the immediate or intermediate seller has notice of a defect and fails to take appropriate action.

3. When the manufacturer is not available for suit due to bankruptcy, being in a foreign country or for some other such reason.
4. When the immediate seller either makes warranties of its own or takes over and adopts the manufacturer’s warranties. This usually occurs during over-enthusiastic selling, when the merchant steps across the boundaries of puffing, producing reasonable customer reliance and therefore warranting the product. It should be noted however that merely explaining a warranty is not adopting it.

5. When the immediate seller selects and recommends an item as being suitable for a special purpose. (as in UCC §2-315).

6. The immediate seller can be liable for misrepresentation, e.g., under Restatement (Second) of Torts §402B.

7. When sellers put their own name on a product they cease to be mere conduits and are treated as manufacturers, even if that was their only connection with its manufacture (NC courts have specifically repudiated this kind of liability).97

The seller’s exception is generally considered fair, and useful in eliminating the expense, annoyance, and possible loss of reputation on the part of the immediate seller who might have to defend a case where it was entirely innocent. The problems of the innocent user created by the sellers’ exception are largely taken care of in the limiting provisions quoted above. However, there are two sets of circumstances left uncovered in this list, where an innocent plaintiff harmed by a clearly defective product may not recover. They are:

1. When a defendant only becomes insolvent after the seller has been released from liability, by which time the plaintiff will also usually be barred by the statute of limitations.

2. When it cannot be determined where, in the chain of distribution, the defect was created. A typical example is the exploding bottle case where the container was clearly defective since it should not have shattered during ordinary handling by the plaintiff. If expert opinion cannot show that the defect was present when the bottle was manufactured, then it could have been caused at any point in its journey to the ultimate handler. Prior to the development of the “seller’s exception,” the purchaser could have recovered from the merchant under the warranty of merchantability in the Sale of Goods Act or the UCC. Today, many states, generally by Statute, do not permit the plaintiff to recover. Someone, who has been blinded or has lost the effective use of the dominant hand, will then be without a remedy.

The (Third) Restatement of Torts—Products Liability offers a solution to each of these problems. First, in the event of late bankruptcy, it

97. Morrison v. Sears, Roebuck & Co., 80 N.C. App. 224, 341 S.E.2d 40 (1986). Sellers trademark on a shoe was insufficient to cause them to be treated as the manufacturer.
is suggested in the comments that the statute of limitations might be
tolled and the statutory period deemed to begin when the manufactur-
ing defendant declares bankruptcy. Presumably statutes of repose
might still be deemed applicable to prevent excessive and prolonged
uncertainty as to the identity of the liable defendants.

Second, when it cannot be determined where and when the defect
arose, R 3 T-PL allows that the injured person should be allowed to
recover from the ultimate seller. The plain wording of §1 of R 3 T-PL
seems to be attempting to reverse the general trend, seen in the Model
Uniform Statute and also in the Common Sense Product Liability
Legal Reform Act of 1996, which is to release non-manufacturing
defendants from liability. It could however be taken in another and
more modest sense, as an amendment to and not an abolition of the
sellers’ exception. This might be more likely to be acceptable since it is
only adding one more exception in addition to those already allowed.98

§18 Problem (3) - The almost impossible task of the plaintiff in proving
design defects

Traditional proof of negligent design is indeed a formidable obsta-
cle in the way of the injured plaintiff seeking recovery. And strict lia-
ability, moving from the idea of fault to the modern notion of defect,
has not really helped much. Defect must be proved by showing an
alternative safer feasible design. There are a number of ways of going
about this task, some easier than others.

1. Proof of defective design may be relatively simple in the case of
a “woops” design99 defect where some aspect of design has been acci-
dentally overlooked, e.g. the fact that an automobile will be sold in
Northern Canada and driven in severe winter conditions. Comparing
the car with those normally marketed in the far north and identifying
the missing design features may then show defective design. The pro-
cess is similar to that used in showing manufacturing defects.

2. In the case of a conscious design choice, proof of superior
alternative design may be attempted by showing that certain desirable
features, especially safety features, are incorporated into the design of
comparable articles produced by competitors. This approach may not
be as open and shut as it appears. The competing article may be con-
sidered a higher-grade item compared with the one in question (a Cad-
illac as compared with a Ford Pinto) and so might be expected to have

98. See Restatement (Third) of Torts - Products Liability §1 cmt. e.
99. Professor James A. Henderson’s term for a design defect which is the result of
simple oversight rather than conscious choice. They are sometimes called “drawing
board defects.” See Henderson & Twerski, supra note 11, at 445.
more safety features, the cost of which would be reflected in the price. In short it must be shown that the two articles are comparable, which may raise all sorts of difficult questions, since things can be alike in one way and not in another.

3. Conscious design defect may be proved by showing that a suitable safety device is already available and that it could have been incorporated in the design. This again is not an assured road to success. If the device has never been incorporated into a similar article, then the objection can be made that it might not work, or might have functional disadvantages, or get rid of one danger only to increase the likelihood of another. All of these possibilities might argue against its use. In short this is a weaker argument for a design defect than the presence of the safety device in a competing article of the same quality, where its performance would already have been put to the test.

4. The final method, and the usual one, of proving design defect is to show that using available technology, the article could have been redesigned in a manner that would make it safer to use. This is seldom an easy task and normally requires multiple experts. Engineers must testify that it can be done and that the article will still function reasonably well. Safety engineers are required to show that it will reduce the risks of the harm in question and not unduly increase the risks of other harms. Economists must testify to calculate how much the new feature will increase the cost of the article and marketing experts are required to show that the new item will be acceptable and hopefully attractive to purchasers.

This approach is obviously extremely expensive and labor intensive. Very few plaintiffs have the means to finance such cases, therefore the cost must be carried by the plaintiffs’ attorneys who will recoup their expenditure and obtain their fees from the recovery, if any, at the conclusion of the case. The arguments for and against the contingency fee system are well known and inconclusive, especially from the plaintiff’s perspective. In their favor they allow plaintiffs’ causes to proceed that might otherwise fail for lack of financial support. To that extent they help the plaintiff. But on the other side, they only benefit plaintiffs who have a considerable likelihood of a very large recovery, in order to make the effort and cost of litigation worthwhile. All other cases will be effectively screened out.

Scholars and courts have devoted considerable thought and effort to devising ways to ease the plaintiff’s burden of proof, making litiga-

100. For example, a kill switch said to be available that would cut off the engine in a boat if the operator’s hand was removed from the tiller would be a conscious design defect. See Boatland of Houston, Inc. v. Bailey, 609 S.W.2d 743 (Tex. 1980).
tion less expensive and recovery more likely. The most notable of these is found in the California case of *Barker v. Lull*, where a two pronged analysis was allowed. First, the plaintiff was allowed to employ the "user expectation" test, and then, if the reasonable plaintiff would not have purchased or used the product, the burden shifts to the defendant. The defendant can then rebut the presumption of defect by presenting evidence that the risk/benefit ratio of the chosen design made it reasonably safe for its intended uses. *Barker v. Lull*, has not been well received and has been restrictively interpreted even in the California courts of first instance. There are good reasons for courts to have reservations about the user-expectation test and also about interfering with the traditional rule that the plaintiff must prove his case. The reasonable user is not really an ordinary layperson, but a hypothetical super-being who knows everything about the product. The danger is that the jurors will not appreciate this and think that they, as ordinary reasonable beings, can give an opinion about a design defect with the knowledge they have. The occasions are rare when a layperson, without benefit of expert opinion, can say with confidence that a design is defective. One might interpret *Barker* liberally and say that a minimum of expert opinion, short of full proof of design defect, might be sufficient to shift the full burden of proof over to the defendant. But this is a significant departure from the common law rule that the burden of proof is on the plaintiff. This more casual approach to expert testimony has also been made less acceptable by the *Daubert* decision, interpreting the Federal Rules of Evidence in a manner that casts the judge in the role of gatekeeper, rejecting any expert evidence that is not considered relevant and reliable. This means that both sides must face the possibility that their experts will not be allowed to testify if the evidence that they are offering seems

102. Id.
103. Id.
104. Where reportedly plaintiffs are ordinarily expected to come forward with evidence of reasonable alternative design.
105. See Campbell v. General Motors, 649 P.2d 224 (Cal. 1984), where the plaintiff was thrown from one of the seats facing sideways at the anterior end of a city bus when the driver turned a corner at high speed. A photograph showing that there were no hand rails near these seats was considered sufficient to raise a jury question, though no expert was called to testify as to a design defect. Even this somewhat rare case might be questioned since there was presumably some design choice about the placing of these seats.
106. Daubert, 509 U.S. at 579.
suspicious to the presiding judge. 107 In short, making a case of defective design is not likely to be easy in the near or foreseeable future, at least in those cases where the design represents a conscious choice—balancing one alternative against the others and selecting the one that seems to represent the best available option.

There does not seem to be any reasonable alternative to requiring full-blown proof in design defect cases at the present time. The system is stacked against the plaintiff, especially if recovery is doubtful or likely to be for less than a very large amount. This bias is likely to remain with us for some time for a number of reasons.

1. Design cases call into question an entire line of products not merely individual items. The economic consequences to the manufacturer are therefore infinitely greater than in the case of products with a manufacturing defect.

2. These economic consequences do not merely affect the manufacturer of the article but are visited also on the community as a whole. For instance, if a line of products is discontinued or priced out of the market, a great many people may lose their jobs.

3. Putting design choices in jeopardy may also have the effect of discouraging manufacturers from considering new designs, since design related problems are more likely to surface during use with novel items than with those that have been around long enough to have the bugs worked out of them.

§19 Problem (4) - Design by jury

Another endemic problem in proving design defects is that there is likely to be a battle of the experts. In the typical scenario, experts will be produced by both sides, and the jury, presumably lay, will have to decide which of the contradictory expert opinions to believe. Ideally the jurors will have been able to follow the experts' arguments and decide the matter on its merits. Realistically, jurors will decide, without fully understanding them, which of the arguments seems to be better. Jurors are likely to side with the expert who has explained his view better (the superior teacher) or, at worst, side with the one whom looked honest and sincere. The path to a jury hearing is strewn with obstacles, but once the plaintiff manages to get to the jury the chances of a recovery are reasonably good with a severely injured and sympathetic plaintiff.

107. Judge Kozinski, rehearing Daubert, excluded, as suspicious, all evidence based on studies undertaken after the expert had been engaged by either party. This is not a scientific but a lay opinion. The studies might be excellent but were, nevertheless, not going to be admitted into evidence.
they cannot really win a jury trial: even if the jury finds for them they have lost. 108 The experience and the publicity are both so bad that every effort will be made not to endure this process again. This might seem to be a good result for a trial, but usually it is not. Typically, manufacturers will withdraw the challenged article from the market and be reluctant to introduce new articles for fear of litigation. 109 The preferred option of defendants then is a directed verdict or better still summary judgment. Unfortunately, most judges feel unable to take the question from the jury so long as there is some foundation in fact for the plaintiff's claim that there is an alternative safer feasible design. This is a difficult decision, determining how much proof is needed to defeat a motion for judgment as a matter of law. Professor Aaron Twerski has identified ten factors that might assist the court in this matter, 110 but unfortunately like most lists of factors, there are no clear instructions as to how it should be used to reach a decision. The effectiveness of such decision-making devices could be improved either by considering some items to be more important than others (a weighted factor system) or by giving number values to each item (scored factor system). Twerski's factors may accordingly be restated as follows and divided into major and minor factors.

**Major Factors**

1. Polycentricity: The various parts of the design are interrelated so that any design change would require changes in other items. This would mean that it would be very troublesome and probably costly to make a change. It would also be difficult to be sure that the change would result in an overall improvement.

2. Close risk-utility proof: The advantages and disadvantages of the compared designs are evenly balanced.

3. State of the art: The alternative design may not be practically feasible in light of the state of the art.

---

108. See Dawson v. Chrysler Corp., 630 F.2d 950 (3rd Cir. 1980) (discussed in §19 supra).

109. A good example here is the withdrawal of the appetite suppressant drugs Pondimin and Redux from the market by the manufacturer, American Home Products (AHP). Protest from physicians attempting to deal with morbid obesity was loud but unavailing. Even if government concerns about the drugs were quieted (the side effects though serious were relatively rare and nothing in comparison to the risks of morbid obesity) the company had no wish to continue the battle.

MINOR FACTORS

1. **Tenuous causation**: The case for causation-in-fact may be tenuous i.e. it may not be certain that the targeted defective design feature actually caused the plaintiff's harm. This will especially be the case when the evidence supporting the causal connection is statistical.

2. **Shifting duty**: Independent and responsible decision-makers, other than the designers, may have played a significant role in assessing and utilizing the allegedly hazardous product. This would be relevant for instance if there were all sorts of other options available on the market.

3. **Consumer choice**: Consumers may wish to preserve the option to purchase a less expensive or otherwise desirable product without the alleged safety feature.

4. **Obviousness of danger**: The hazard may be open and obvious to the ordinary consumer.

5. **Cost**: An alternative design could substantially raise the cost of the product to the consumer.

6. **Design safety review process**: The safety review process that led to the formulation of the product's design may have been extensive.

7. **Legislation and other governmental input**: Governmental safety regulations may have played an important role in the design process.

These factors might be put together in various combinations. Consider the following. The first three seem obviously very important and might be considered the major factors. It could be arranged then that when all of these (or two out of three) are present the design question is not justiciable and judgment as a matter of law should be entered for the defendant. Alternatively if only one (or two) are found, then the showing of a certain number of minor factors would determine the matter. Thus, if only factor number 1 is present, but four of the seven minor factors can be shown, then the proposed design change should not be put to the jury.

It would probably be more objective and more workable to give number values to the factors (scored system) as follows. Double number value can be assigned to the major factors, but this does not always make much difference in the result since the maximum possible score is also thereby increased. A simple 0-2-1 system has therefore been adopted here and arranged so that a high score is bad for plaintiff.

1. Polycentric design question?
   
   [NO = 0, YES = +2, MAYBE = +1]

---

111. Noting the dictum of Lord Rutherford (Nobel prizewinner of electromagnetic fame) that statistics was a terrible way to do science (reported in various versions).
2. Are overall risk/benefit advantages of alternative design superior to challenged design?  
[YES = 0, NO = +2, MAYBE = +1]

3. State of the art technology available?  
[YES = 0, NO = +2, MAYBE = +1]

4. Was harm due to alleged defective design?  
[YES = 0, NO = +2, MAYBE = +1]

5. Shifting duty: independent responsible decision-makers involved in design choices?  
[NO = 0, YES = +2, MAYBE = +1]

6. Preservation of consumer choice issues present?  
[NO = 0, YES = +2, MAYBE = +1]

7. Danger obvious?  
[NO = 0, YES = +2, MAYBE = +1]

8. Cost of alternative design too high?  
[NO = 0, YES = +2, MAYBE = +1]

9. Extensive safety review in design process?  
[NO = 0, YES = +2, MAYBE = +1]

10. Governmental safety regulations incorporated in the design?  
[NO = 0, YES = +2, MAYBE = +1]

Both systems may be illustrated by applying them to the facts of *Dawson v. Chrysler* where the plaintiff, a police officer, was injured when his patrol car crashed into a metal pole in a culvert. The pole pressed into the side of the car and the plaintiff was propelled up banging into the roof thus injuring his neck and rendering him quadriplegic. The proposed design change was additional metal in the frame to stiffen it and prevent collapse inward. Chrysler argued that stiffening the frame would reduce its ability to absorb force in a different kind of accident increasing the likelihood of injury.

Applying the weighted factor system, it can be seen that the problem is polycentric, so that further design might be necessary to deal with the loss of force-absorbing capacity in the new design and it is not clear how this is to be accomplished. There is clearly a close call as to the risk/benefit characteristics of the compared designs. There was no state of the art problem. Thus, only one or doubtfully two major factors are present. None of the minor factors are clearly present so that without further facts, deciding the issue would depend on whether the system allowed decision on the basis of the presence of two major factors.
The scored system could be read as follows. Polycentricity +2; close risk/benefit characteristics +1; technology available 0; causation doubtful +1; no independent decision makers involved +1; consumer choice doubtful +1; danger not obvious +1; costs of alternative design possibly high if gas costs are included +1; probably extensive safety review in design process +2; governmental safety regulations probably incorporated in design process +2. The total then would be 12 out of a possible score of 20, i.e., the result is just above the median line.

Since the summed score is above the median, this suggests that the result, though close, favors the defendant. The fact that an entire line of products is in jeopardy might make it desirable that the score should be significantly below the median line before the case should be deemed sufficiently in favor of the plaintiff to be submitted to the jury. This might especially be the case when, as here, the design proposals are clearly polycentric and therefore unsuitable for jury determination. This was in fact the intuitive feeling of the judge deciding the case.113

§20 Problem (5) - The impossibility of providing litigation-proof warnings and instructions

The long list of requirements for an adequate set of warnings and instructions has been treated earlier in §14. They are clear and reasonable when considered in the abstract, but difficult to apply in actual cases. There are a number of reasons for this:

1. It is almost impossible to anticipate all the odd circumstances that can produce an accident.

2. Users vary greatly in their ability to read and follow instructions, depending on their level of intelligence, education and even cultural factors.

3. If some degree of user inadvertence or even carelessness is to be anticipated, how much should this be considered and incorporated into the warnings, e.g. with especially lurid symbols or color codes to catch the users attention.

4. Space for containing warnings and instructions is not infinite but limited. Ideally the warnings should leap out to the user from the label on the product, but the list of dangers tends to be long and the appropriate accompanying safety instructions are therefore bulky and

complicated. The label then is unable to contain all this information and it spills over into an accompanying brochure or booklet that is too long for most people to read and in any case may quickly be lost.

5. There is also the dilution effect, mentioned earlier—namely that multiplying warnings diminishes the effect.

6. Finally and most importantly, the elements of warnings and safety instructions are so numerous that it is almost impossible to imagine putting them all together into a label or instruction book with any hope that they would prove adequate in a given set of circumstances.

Since the task appears hopeless it is hardly surprising that the production of instruction booklets is not always taken seriously. Some manufacturers give-up and supply no warnings whatsoever, dumping responsibility for identifying and avoiding risks on to the user. This is particularly the case with familiar and much used substances, where it is hoped that common knowledge will be sufficient notice of danger. Indeed putting warnings on such items might be considered an admission that they were dangerous or an admission that the danger was not obvious and therefore required a warning, which would almost inevitably be deemed inadequate.

One response to this clearly undesirable state of affairs is for federal government departments to provide official sets of warnings and instructions that shall be deemed sufficient. This route has been taken with a number of products, for example, tobacco. An official government mandated package insert gets rid of the warning problems so far as manufacturers are concerned. If the official warnings and instructions are given, there is no liability. Unfortunately the official warning system does not work so well for users. Government agencies can get very far behind in their tasks, especially now with downsizing of staff. The current set of official notices may then fail to notify the users of serious risks and even dangers. The other problem is that governmental agencies are more likely to set up reporting systems where every adverse reaction is noted. The result is a mass of undigested information that may have no real causal connection with the item in question. Finally, the governmental warnings are likely to be bulky, rendering them unusable. So far as medicinal drugs are concerned, the task of pharmacovigilance may be more properly assigned to a committee of experts, e.g. professors from pharmacology departments.

114. Note that in safety engineering parlance, potential harm is not the same thing as danger. Danger is defined as unreasonable risk of harm.
in prestigious medical schools.\textsuperscript{115} Such a committee would be responsible for sifting through the mass of reports of adverse reactions to medications and issuing responsible advisories and warnings that would be very helpful to the general public.

While all these measures are appropriate and potentially useful, ultimately the manufacturers must accept responsibility for the safety of their products with oversight from government agencies and ultimate review of individual cases by the courts. If this can be accomplished without subjecting manufacturers to the constant threat of litigation, the system would probably be acceptable to all parties. The key again would be to screen out all but the most legitimate cases before trial or at least prior to submission to a jury. A formal evaluation system might be helpful here. Important factors to be considered would be:

1. The reliability of the causal connection between the item and the harm.
2. Actual or imputed knowledge of the danger on the part of the manufacturer.
3. Whether the danger could have been discovered by more adequate testing.
4. Whether the danger could have been avoided by state of the art design or other safety measures.
5. The extent to which the danger was common knowledge.
6. Whether there was actual knowledge of the danger on the part of the plaintiff.
7. The amount and level of safety testing actually carried out by the manufacturer.

A number weighted factor system could be devised for these items, but considering that each of them is often crucial and determinative in itself a decisional algorithm might be more appropriate.

Failure to read instructions and warnings has not been included in the diagram as it is a form of user fault that is not really relevant to the question of the adequacy of warnings and instructions. However, it might be deemed present in the diagram since failure to read warnings will raise the issue of proximate cause.\textsuperscript{116}

\textsuperscript{115} The Dunlop Committee in Britain was established along these lines. It has now been replaced by a Committee on the Safety of Medicines (CSM) which has set up a Yellow Card Scheme, a reporting system where all known or even suspected adverse reactions following treatment with a drug are reported. Some 25,000 such reports are registered each year in the U.K.

\textsuperscript{116} See §22 infra.
Illustration 9: The Effects of Plaintiff Misuse
§21 Problem (6) - Difficulties in measuring user fault

In general, plaintiff fault is an important notion in torts, but it has some peculiarities in products liability cases that merit special attention. Estimates vary, but it has been calculated that over two-thirds of all injuries related to consumer goods are predominantly, if not entirely, due to misuse and abuse of the product. User fault thus features prominently as a defense in products liability cases.\textsuperscript{117}

One of the early problems with “strict liability” under the Restatement (Second) of Torts was that a number of courts took the position that since due care is not a defense, then fault on the part of the user should be irrelevant also. This problem carried over into relatively modern times in the debate as to whether comparative fault could be used in strict liability cases. It was argued that the two forms of liability, defect and fault, were like apples and oranges that could not be compared to one another. For the most part this controversy can be considered settled. The notion that plaintiff fault was irrelevant is now repudiated in MUPLA, Restatement (Third) of Torts—Products Liability (R\textsubscript{3}T-PL) and in most state products liability statutes. It has also been abandoned by the courts in most jurisdictions. In some form or other, by some kind of reasoning or other, the fault of the plaintiff is taken into consideration, calculated as a percentage figure and used to reduce or bar recovery. This is hardly surprising. It is very difficult to keep user fault out of the picture. It has been said that if you kick it out through the door it returns through the window. If excluded in the form of plaintiff’s negligence it re-enters as misuse or abuse or even under the notion of causation. It is thus handled in a number of ways and under various headings.

Even though there is now general agreement that user fault is a relevant consideration in products cases, significant disagreements exist on matters of detail. The two main areas of contention are: 1) how should user fault be allowed for and calculated in a recovery, and 2) is it necessary for user fault to be classified into various subtypes?\textsuperscript{118} There are four main ways in which courts have dealt with and considered user fault:

1. Contributory negligence.

\textsuperscript{117} Accident statistics tend to be collected under special heading such as automobile accidents, domestic accidents, industrial accidents and so on. Any overall estimate is thus likely to be an educated guess, but the relation of accidents to user fault of one sort or another is certainly high. Accident statistics collected by the University of Maryland can be viewed at www.umm.edu/non_trauma/stats.htm.

\textsuperscript{118} See §22 infra.
An objective standard is used: what a reasonable person with the knowledge and experience of the plaintiff would do to protect themselves under the circumstances. It must, however, be remembered that the reasonable person is allowed to be a little less careful for their own safety than when dealing with that of others. This more lenient standard of care is particularly noticeable in cases arising out of accidents in the work place where workers are under pressures of one kind or another to perform and produce. In the tiny minority of states that retain the contributory negligence doctrine (including North Carolina) user negligence is a complete defense, totally barring recovery.

2. Pure comparative fault.

Comparative negligence has several forms. In the pure form as outlined in Li v. Yellow Cabs, the trier of fact may allocate any percentage of fault (ranging from 0% to 100%) to the user and it will be deducted from the recovery.  


In most comparative fault jurisdictions, percentage reduction only operates up to a certain threshold level (50% or some other measure) above which it is a complete bar to recovery.

4. Assumption of the risk.

Assumption of the risk, a concept particularly associated with liability for unreasonably dangerous activities, is a defense to strict liability under §402A. It is essentially a particular form of plaintiff negligence, which acts as a superseding cause relieving the defendant of liability, much as an intentionally wrong act would do and for much the same reasons. Its elements are:

a. Subjective knowledge of the danger,
b. Voluntary acceptance of the risk, and
c. The finding that taking the risk was unreasonable.

Some jurisdictions still observe a distinction between primary and secondary assumption of the risk. Primary assumption of the risk is sometimes called a "no duty" type of case because the plaintiff either expressly or impliedly agrees to hold the defendant harmless. This could be seen, for instance, where a neighbor lends a car to a husband rushing his wife to hospital in an obstetrical emergency where the life of the fetus was threatened by prolapse of the umbilical cord. The neighbor is willing to help but informs the husband that that the

119. 532 P.2d 1226 (Cal. 1975).
120. See Restatement (Second) of Torts §402A cmt. n.
121. If there was no reasonable alternative, using a product known to be defective would hardly be considered assumption of the risk. Thus in the example given above, driving a car with known defective brakes might be considered a reasonable choice.
brakes are defective and that the car is dangerous. The husband, however, might well reply that this was the least of his worries in the present circumstances and proceed to borrow the car. If the defective brakes cause an accident where husband, wife and baby are injured, the neighbor would not be liable to them, nor probably to anyone else. This distinction, once considered rather obsolete, since it made no difference in the result (no liability with any kind of assumption of the risk), has assumed new importance in comparative negligence jurisdictions where the “modern” approach (represented in MUPLA and R3T-PL) is to make primary assumption of the risk an absolute defense, but to treat the secondary type, where both plaintiff and defendant are at fault, as a form of comparative fault which will reduce but not necessarily bar plaintiff’s recovery.

The various ways in which user fault is handled are based on preferences concerning the basic values involved. Those who emphasize exact fairness in dealing with the injured plaintiff will tend to favor pure comparative fault where the recovery is only reduced by the amount proportional to the user’s contribution to their own harm. Those (few) who still hold to contributory negligence feel that society as a whole should not be taxed to support foolish behavior by individuals. The threshold forms of comparative fault represent a compromise between these extremes where the recovery will be proportionately reduced up to a certain percentage of fault, allowing for fairness to the plaintiff, but beyond that point recovery will be barred, taking into consideration the interests of society as a whole.

These alternatives do not exhaust the available options nor are any of them beyond criticism. The main problem with each of them is the way in which they are likely to be applied by the jury (or the court where a jury is not available). Jurors must be informed of the effects of their determination of fault, and this is likely to affect and even distort their judgment. Juries may thus deny and discount plaintiff fault altogether in a contributory negligence jurisdiction since they know that finding fault will totally bar recovery. Similarly juries in a modified comparative negligence jurisdiction are likely to reduce plaintiff fault to a point just below the barring threshold to allow the plaintiff to recover. In the pure comparative fault jurisdictions, attorneys often complain that the juries, or the court, rather quickly give a 50/50 allotment of user fault rather than wasting time getting an agreement on a more precise set of numbers.

The problem with each of these systems is that they are either too simple (contributory fault) or too complicated (both forms of comparative fault). Something in between might achieve fairness and be easier
for juries to understand and apply. Describing the point at which anything lies on a continuum is always a difficult task; it is generally better to provide a simpler scale with three or four items on it. Applied to the present purpose, jurors might be asked to decide whether the plaintiff's fault, if present and not a total bar, could properly be described as 10%, 25%, 50% or 75%. Given such a simple scale the jury could probably come to an agreement fairly rapidly, certainly more easily than in pure comparative fault. This would also allow for reasonable fairness and prevent the jury from artificially manipulating their numbers to prevent what they see as an injustice. Where the jury cannot agree on a particular percentage of user fault, the matter can be resolved by the court in a number of ways. There is no need to detail these here. They can be regarded as formulae that the court can apply to a jury response that is not unanimous. Simplicity is not so important here as the court is a single individual and moreover, over time, would become familiar with the formula and comfortable with its use.

§22 Problem (7) - Should forms of user fault be lumped together or classified into subtypes

User fault can be subdivided into a number of subtypes according to the type of improper handling exhibited by the defendant. These are misuse (handling the article other than as instructed), alteration (e.g., removing the safety devices) and abuse of the product (e.g., not maintaining it properly). There are two main ways in which this matter can be viewed:

1. The traditional approach has been to treat these as all-or-nothing defenses, either relieving the defendant of all liability or, if deemed foreseeable misuses, leaving the recovery undiminished introducing a new carburetor into a boat to engage in water sports might well be considered an unforeseeable misuse that would bar recovery. On the other hand "hot wiring" a defective starter which, despite numerous returns to the dealer for repair, had failed to work and was rendering a tractor useless, might be deemed foreseeable and reasonable, allowing full recovery.

2. The modern (perhaps ultramodern) approach, represented by MUPLA and R3T-PL, is to put all forms of user fault (including secon-

122. Daly v. General Motors, 575 P.2d 1162 (Cal. 1978) where a similar scheme was advocated by Mr. Justice Clark, a vigorous critic of pure comparative fault.

123. An average of the various percentages might be calculated and the result adjusted to the nearest of the allowed percentage figures. A variant of this is where the lowest and highest numbers are discounted and the remainder averaged.
dary assumption of the risk, misuse, alteration and abuse) in the same category (mixed together in the same pot) and allow the trier of fact to consider them together and reduce recovery by an appropriate amount ranging from 100% to 0%. This has been followed in a number of cases, has wide approval among scholars, and will probably prevail in comparative fault jurisdictions. Its main virtue is that it is simpler for juries to understand since it avoids instructions on the different kinds of user fault.

These two alternatives, the traditional and the new, are not totally exclusive of one another in that the trier of fact in the modern approach is free to award 100% of the recovery or nothing at all as they see fit. Unfortunately this is a jury decision where sympathy for a badly injured plaintiff might enter into the process. From the perspective of the defendant, it would be preferable to have the court decide as a matter of law whether a misuse, alteration or abuse, was so entirely out of line (like modifying a fishing boat for racing) that it did not raise a jury question. However, if the misuse was reasonable, then the jury might be allowed to decide whether and by how much the award should be reduced. This would seem to be the kind of question where a scored factor analysis might prove helpful. Any number of factors might be identified in a particular case but the following list may be taken as a provisional model in a misuse/alteration case, where high numbers are bad for the plaintiff.

1. Was the alteration in response to some defect in the article? [YES =0, NO=+2 MAYBE= +1]
2. Was there a reasonable alternative to the present design? [YES = 0, NO = +2, Maybe = +1]
3. Could the misuse/alteration be expected to interfere with the functioning of the article? [NO = 0, YES = +2, MAYBE = +1]
4. Could the alteration or misuse be deemed a dangerous action? [NO = 0, YES= +2, MAYBE = +1]
5. If the change was made by a third party was the plaintiff aware of it? [NO = 0, YES = +2, MAYBE = +1] OR
   If the change was made by the plaintiff, was ze competent to make the alteration safely? [YES = 0, NO = +2, MAYBE = +1]
6. Was there misuse/alteration for a useful purpose not just a frolic? [YES = 0, NO = +2, MAYBE = +1]
7. Was there any other plaintiff fault that contributed to the harm?

[NO = 0, YES = +2, MAYBE = +1]

A larger or smaller number of factors might be listed as being relevant in a particular case. In the set listed here the median score would be 7. A score below this would suggest that the matter might be considered a jury question (presented with a four point scale as described in the previous section) or if very low might suggest a directed verdict for the plaintiff. A score greater than 7 (or 8 or 9) would indicate that a directed verdict for the defendant would be appropriate. The system, like any other formal game, will not always yield bright line directives as to how the case should be decided. It must be remembered that number games are not real life, and a numbered factor system such as this is only intended to be an aid to decision, not a mechanical tool to be rigidly and unthinkingly applied.

The working of this system may be illustrated by applying it to the facts of an actual case. A tractor was supplied to the plaintiff that proved difficult to start. It was taken several times to the dealer and returned as fixed, but the problem was still present. The plaintiff's brother, who worked for him, needed to use the tractor and "hot wired" the starter. This bypassed the safety devices was designed to only allow the engine to start if the vehicle was neutral or park. The plaintiff, unaware of his brother's actions, pressed the starter while standing beside the tractor. The tractor was in gear (not neutral or park) and ran over him, causing serious injuries.

If this fact situation is run through the scored factor system above, one derives scores of 0 + 0 + 2 + 2 + 0 + 0 + 2 with a total of 6 out of a possible score of 14. This result, coming below the median score, would suggest that this might be a jury question. In the actual case the court decided that the alteration was sufficient to act as a total bar to recovery, however, the decision was controversial and had the factor system been used, a score below the median might have suggested to the court that they ponder deeply before deciding on a directed verdict.

Once it is decided that a jury question exists, the modern approach may be best, throwing all of these factors into the pot so that the jury can make appropriate deductions for user fault. The advantage here is that separate instructions for each kind of user fault are not required and therefore the jury is less likely to be confused by complicated legal terms. Again the four-category system (deducting

10%, 25%, 50% or 75%) would seem simpler and easier for juries to manage than current arrangements.

Alternatively, each item of fault could be measured by the jury on the four-point percentage scale, allowing the court to add the scores together and perhaps take an average of them as the final percentage of plaintiff fault. This might be an interesting research project but is clearly too complicated to commend itself for adoption in actual practice.

Failure to read instructions and warnings is another form of user fault that merits a special note. The general rule is that warnings and instructions are deemed read. One who proceeds to use the product without reading them cannot complain if their failure to do so proves harmful. Even if the warnings were inadequate, failure to read them will raise the issue of proximate cause. A defective warning can hardly be thought to have been the cause of an accident when it would not have been read even if it were adequate. However, a few courts in particular circumstances have ruled that failure to read the instructions does not necessarily bar the plaintiff's recovery. The reasoning here is that if adequate warnings had been provided, some users would read them and the information provided might pass into common knowledge and perhaps reach the ears of the plaintiff. This latter approach may seem to favor careless plaintiffs too much, and given the present fiscally conservative climate of thought in products liability the more strict approach, requiring warnings and instructions to be read, is probably to be preferred.

§23 Problem (7) Allocating liability among multiple defendants

The old common law held that the plaintiff must prove his case against each defendant individually. This was obviously inconvenient for all parties and was replaced by more practical arrangements such as equitable joinder, where all issues in an event with more than one party involved were decided together at the same hearing. Yet it was still necessary for the plaintiff to prove the case against each defendant individually in order to hold him or her jointly and severally lia-

125. See N.C. GEN. STAT. 899B, which is fairly typical of state products liability statutes.
126. See Holley v. Burroughs Wellcome Co., 74 N.C. App. 736, 330 S.E.2d 228 (1985), where a warning, though not needed for the physician anesthesiologist who was already aware of the problem, might have somehow reached the nurse anesthetist handling the case.
ble. This older rule has been relaxed in several circumstances. The simplest of these is when there are several defendants, all at fault and potentially liable, but it is not certain which of them caused the problem. The rule laid down in the famous case of *Summers v. Tice*, is clear and generally followed: all defendants are liable unless they can show that their fault did not cause the plaintiff's harm. 128 The situation is not so clear when some of these possible defendants were at fault but others were not; the traditional rule is that *Summers v. Tice* does not apply and the older common law rule prevails: if it cannot be shown which of the defendants caused the harm, the plaintiff cannot recover against any of them. Most of the cases representing this rule are old 129 and one wonders if it would or should survive. It would seem better, following Wigmore, to make all the defendants who are at fault liable unless they can prove that their fault did not cause the plaintiff's harm. 130

Another type of multiple defendant case is where several persons act together in a joint enterprise. These are taken to be, in effect, a civil conspiracy, with individuals joined together for a wrongful purpose; and each of the individuals will be held responsible even though they did not individually cause any harm to the plaintiffs. 131 Other recent developments in the law relating to multiple defendants are more controversial. Joint activity has been extended to cover all the parties associated with a hospital operation even though they are acting independently on the ground that they had a special duty to care for the unconscious patient during surgery. 132 Even more controversial are the cases arising from use of the drug DES to prevent threatened abortions during pregnancy. The drug was effective but the incidence of pelvic cancer was high among the surviving infants. The cancers did not appear until late teens or early twenties, by which time it was no longer certain which manufacturer had supplied the pills taken by the parent. The famous case of *Sindell v. Abbott* applied a market share approach, holding manufacturers liable for the harm in proportion to their share of the market. 133 This was a very bold departure from basic

128. 199 P.2d 1 (Cal. 1948).
129. They are commonly railway cases where sparks from the engine created a fire which merged with another conflagration caused, e.g., by lightning. Courts in the 19th century appear to have favored railways as a matter of policy.
133. 607 P.2d 924 (Cal. 1980).
common law principles, where liability is based on fault\textsuperscript{134} and Sindell has not been followed very widely. It has been considered especially obnoxious in that it is likely that defendants without fault could still be liable, since it would be difficult to establish their innocence after such a great lapse of time. There are several other problems with the market share theory, especially that it has many possible variants. The market share can be calculated nationally or in the relevant state (or locality). In one case the parties were not even allowed to avoid liability by showing either no fault or that their product did not cause the harm.\textsuperscript{135} Joint enterprise cases are therefore likely to be, and probably should be restricted in their application.

One serious problem with multiple defendants relates to how their share of the liability is computed. The usual method is a \textit{pro rata} split where the judgment or settlement is divided equally among all the defendants present to answer in court, who can in turn seek contribution from other liable parties. If some of the defendants are not solvent then their share is usually divided among the others so that the recovery of the plaintiff is not reduced. This arrangement between defendants may be followed even in comparative negligence states.\textsuperscript{136} The plaintiff's fault is taken into consideration and computed as a percentage of the total damage, but the rest is divided equally among the defendants. The reason given for this departure from the comparative fault principle, is that more than one percentage calculation would be too confusing for the jury. However, an increasing number of jurisdictions, probably the majority now, apportion fault between all parties, both plaintiff and defendants, in a comparative manner, though there are several variant arrangements.\textsuperscript{137} In such cases it is likely that each of the defendants will pay only their own share they will not be jointly and severally liable. This system is intended to be fairer to defendants, but it may do so at the expense of the plaintiff. It is a departure from the common law view, which held that the innocent plaintiff should be

\textsuperscript{134} In the case of strict liability there is still an element of fault present, either bringing a dangerous entity on to the land or releasing a defective article into the stream of commerce.

\textsuperscript{135} Hymowitz v. Eli Lilly, 539 N.E.2d 1069 (N.Y. 1989).

\textsuperscript{136} Retained in the Uniform Contribution Among Tortfeasors Act in 1955 edition. \textit{But see} Henderson & Twerski, \textit{supra} note 11, at 69, where it is stated that a majority of states now have replaced pro \textit{rata} shares among tortfeasors with an equitable contribution arrangement (there are several types) which relates the amount of the share of each tortfeasor to their fault.

\textsuperscript{137} If a defendant's fault exceeds that of (the plaintiff or a certain figure) that defendant may be held jointly and severally liable for the entire amount of the damages.
compensated in full, even if it involved some unfairness to the defendants, who were after all at fault. This debate is largely political with defendants and their insurers obtaining reform legislation applying equitable division of damages to them, and plaintiff oriented interests opposing them both in the legislature and by constitutional challenge in court. There are a number of variants on equitable apportionment of damages, but none have commended themselves to all or even the majority of jurisdictions.\textsuperscript{138} It is perhaps worth noting that the Restatement (Third) of Torts - Products liability, takes no position on this issue and has simply left the state courts to follow their own rules.

\textbf{PART V. SUMMARY AND COMMENTS}

\section*{\textsection 24 Overview of the argument}

The review section of this article (Parts I - III) outlines the modern history of products liability law. Part II describes the earlier stages of this development where older remedies such as negligence, express and implied warranties, strict liability for dangerous entities, negligent speech etc., originally developed in earlier and simpler circumstances, were modified in various ways to function in the modern world of mass manufacture and distribution. The ghosts of these older remedies created problems, e.g. continuing confusions relating to such things as privity and prompt notice of defect under Uniform Commercial Code provisions. The Restatement (Second) of Torts \textsection 402A attempted to substitute a completely new apparatus in the form of strict liability for defective products. This too proved troublesome, especially when it was applied to design and warning defects. But the main problem with \textsection 402A was its vague universal definition of defect, employing the user expectation test. This was difficult to explain to juries and almost bound to produce inconsistent results, except in very clear cases, since the average user does not know what they should expect. Therefore, in the seventies and eighties therefore, the idea of a single general notion of all defects was abandoned and separate, individual and objective definitions of the different types of product defect were substituted. This process was finally expressed in the Model Uniform Products Liability ACT (MUPLA) and in the Restatement (Third) of Torts - Products Liability. Manufacturing defects were defined and proved by showing variance from the original design or blueprint; design defects were proved by showing an alternative safer feasible

\textsuperscript{138} The variations are indeed legion. It is common to make defendants jointly and severally liable when their percentage measure of fault reaches a certain figure, say 50%. Others allow joint and several liability only when the plaintiff is without fault.
design; packaging (warnings) defects were proved by the presence of a non-obvious danger where harm could be prevented or mitigated by the presence of appropriate warnings and instructions. This modern approach has been steadily taking over the field of products liability so that only shreds of the older strict liability under §402A remain, and these remnants are largely confined to manufacturing defects. The current trend is to dissociate these new remedies entirely from their original sources and define them completely afresh. The recommendation is to continue this process to its logical conclusion and abandon the old remedies with regard to products altogether, as they seem more confusing than helpful.

A number of problems remain, some of them with obvious solutions, others more difficult, and some seemingly intractable with no clear remedy. These have been described in Part IV. Some suggestions for dealing with these problems have been made, but these must be considered possible escape routes from Egypt to be explored, rather than sure paths to the promised land.

The first is a major problem, the continuing use of older remedies, especially the provisions of the Uniform Commercial Code. These can be made to function fairly well in modern conditions and have in fact proved most useful, but they carry with them the baggage of their conceptual origins which can be confusing, especially to juries. The recommendation of the late Dr. Gary Schwartz, representing the Restatement (Third) of Torts, seems well placed, suggesting that the UCC should be confined to its original commercial purposes, allowing products liability law to develop along its own lines. The objective formulations of MUPLA and the Restatement (Third) of Torts would seem to be an adequate foundation for this. The action in negligence would, of course, continue in those cases where actual fault could be shown on the part of manufacturers and distributors.

The second problem is fixing liability for defects (other than design and warning defects) which might have originated anywhere in the chain of distribution. The recommendation of Restatement (Third) of Torts seems reasonable here, namely that liability should be fixed with the ultimate vendor, who may then "vouch in" those higher up the chain or seek contribution/indemnity from them. This would seem contrary to the current trend, supported by MUPLA and many state statutes, to relieve the ultimate vendors of liability, but this is not necessarily so. There are already several exceptions to the sellers' non-liability, e.g. where the manufacturer/distributor is bankrupt or otherwise unavailable. These are included to ensure that injured users will
not go uncompensated. And R3T-PL is simply adding one more exception to the general rule. 139

The third problem, concerning the difficulty of proving a design defect does not have any easy solution. Making plaintiff recovery easier would mean condemning entire product lines and creating serious adverse economic consequences for society as a whole. The injured users, especially those who do not seem apt to obtain a very large recovery, will probably have no recourse but to apply for inclusion in a mass compensation scheme devised for dangerous items with proven design defects. These are at present slow and unsatisfactory arrangements but vigorous efforts are being made to improve them.

The fourth problem, design by jury, is grounded in the fact that design defect cases commonly require sophisticated expert testimony and demonstrations which are difficult for lay persons to understand. The result may be to condemn a design as unsafe on insufficient or entirely mistaken grounds or even to give a sympathy vote against the design, to compensate a catastrophically injured plaintiff. A widely favored solution is to keep such complex design questions from the jury if possible, and give judgment according to law wherever reasonable and fair. Professor Twerski has provided a list of factors that might be used by lawyers and courts for this purpose. 140 Unfortunately, as with all such lists, there are no instructions as to how it might be used. Weighted and scored versions of these factors have been proposed and illustrated as formal aids to indicate those cases where grants of summary judgment and directed verdict would be appropriate.

The fifth problem is the virtual impossibility of devising an adequate set of warnings and instructions that will provide for all circumstances and uses of a product. Someone, somewhere, somehow, is going to use the article in some odd and dangerous way. And some of these people will go on to claim that the misuse was foreseeable and that a better package insert would have prevented or mitigated the resulting injuries. The present trend on the part of manufacturers and distributors is to obtain governmental immunity provided they use a standard set of warnings. This approach is satisfactory to producers but not to users, as it is unlikely that the standard warnings can be kept up to date. The suggested approach was to allow the courts to ensure that a good faith effort has been made to provide suitable packaging information. As with design defect cases, only those that are

139. There are two exceptions if one considers the recommendation to toll the statute of limitations when a defendant becomes bankrupt after they have been named by the ultimate seller who was then relieved of liability.

140. See §19 infra.
clearly meritorious should survive summary judgment and reach the jury. A decisional algorithm is provided to assist attorneys and courts in weeding out the weak cases.

The sixth problem is the management of user fault. The notion that user fault does not matter is obsolete, but the current formulae for measuring fault are all unsatisfactory. Pure comparative fault is too vague and is often adjusted to 50% as a simple time saving compromise; contributory fault is too harsh on plaintiffs; and both contributory and modified comparative fault have the flaw that the jury must be told the legal effect of their determination. Thus the jury members are likely to manipulate the finding of fault to the point where the plaintiff can recover something. The suggestion here is that a limited item scale should be used to allow the jury to find the plaintiff 10%, 25%, 50% or 75% at fault. This would be easy to understand and would probably allow jurors to adjust the recovery for plaintiff fault more quickly, without needing to compromise their findings to deal more kindly with the plaintiff.

The seventh problem is whether the special categories of defense such as misuse, alteration, assumption of the risk, etc., should continue as separate entities, with separate jury instructions or be treated as fungible items and merged together to provide a single percentage figure that would be used to reduce the plaintiff’s recovery. Both MUPLA and R3T-PL favor the second method, mixing all forms of user fault together in the same pot. This approach has several advantages especially in that it simplifies matters for juries. However, the standard for summary judgment is too vague in cases of unforeseeable misuse and primary assumption of the risk where the defendant is not at fault, and where the plaintiff would not formerly have been allowed to recover anything. It would seem that these too, according to the new thinking, would be left to the jury with the expectation that they would allow a complete recovery with no reduction (0% reduction) or no recovery at all (100%) reduction in such cases. But there is no guarantee that juries will act in this manner. Such cases should therefore be handled by summary judgment or directed verdict and not submitted to the jury at all. Weighted and scored sets of factors have been provided as an illustration of how this objection should be met and cases assigned to or removed from the purview of the jury.

A brief review of the law relating to multiple defendants was attempted. This presents some difficult problems for which no one seems to have a clear solution at this time. The advice of Savigny would seem sound here, to refrain from formalizing the law on any
subject until it, and the social conditions on which it rests, have achieved a stable developed form.\footnote{Frederick Charles von Savigny, \textit{Of the Vocation of Our Age for Legislation and Jurisprudence} (1831) (translated by Abraham Hayward 2000).}

\section*{Looking ahead}

1. Products liability has gone through three phases in the last century: the permissive phase which favored industry and commerce; the rapid development phase in the sixties and seventies with the introduction of strict liability and other measures designed to facilitate compensation of injured users and to make industry "pay its way" and finally the reflective phase of the eighties and nineties. This last phase has been viewed by some as a temporary swing of the pendulum in the direction of industry, motivated by economic nervousness. Other commentators view it as a permanent or long-term position representing mature reflection on the compensation system. There are currently misgivings about the appropriateness of courts and juries to settle all questions of compensation. These misgivings have been particularly strong in relation to two kinds of case, design defect cases (with the danger of design by jury) and multiple-plaintiff cases (mass torts) where inconsistent verdicts can and do occur and where there is the danger that late-arriving plaintiffs may find that the defendant is bankrupt. In any event the next decade is likely to be more difficult for plaintiffs in all jurisdictions. This is already true in design cases where proof of defect is now so complex and expensive to be almost impossible.

2. It would seem likely that alternative dispute resolution (ADR) and other extra-legal procedures will become increasingly important in the products field, especially in design cases. An expert arbitrator may be called in either by the courts or by agreement of the parties. In mass tort cases a fund may be set up to provide fixed limited compensation for large numbers of plaintiffs.

3. It is widely recognized that there is probably no such thing as an adequate warning when there is a severely injured plaintiff. It is therefore likely that there will be an increase in the use of fixed official warnings that will relieve manufacturers of all liability. How these will be produced is another matter, since government agencies are understaffed and notoriously slow to react to new information. Important new warnings may not be made available for years.

4. It is submitted that formal representation of the law in algorithms and other formal systems will facilitate accurate communica-
tion between researchers, practitioners and other concerned parties. A few first steps in this direction have been described here. It is also submitted that decisional logics, in the form of scored and weighted factor lists, would be helpful when important decisions (such as whether or not to submit an issue to the jury) must be made. The formal systems used here have largely been imported from the world of medicine and business. Many other useful formal systems are probably waiting out there to be noticed and put to use in the study and practice of law.