Book Review

PRODUCTS LIABILITY AND THE REASONABLY SAFE PRODUCT. By Alvin S. Weinstein,* Aaron D. Twerski,** Henry R. Piehler,*** and William A. Donaher.****

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I. THESIS

To one uninitiated in the method and logic of the law, products liability may appear to be an area with a simple philosophy—compensate the innocent consumer for harm suffered as a result of defective products. The legal analysis, however, is much more intricate and less susceptible to facile generalization. To the manufacturing community, the legal maze of defect, causation, foreseeable harm, and other concepts must seem both frustrating and insidious.

Products Liability and the Reasonably Safe Product[1] initiates the manufacturing community[2] into the mysteries of products liability law and enables the manufacturer to develop a reasoned scheme of design, production, and marketing. A legal primer for the manufacturer and those involved in the distributive chain, the book discusses the fundamentals of products liability law which should be used as an aid in establishing price and quality control procedures or in making cost and quality tradeoffs in the production process. The book is not intended to address the technical considerations of

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[1]A. WEINSTEIN, A. TWERSKI, H. PIEHLER & W. DONAHER, PRODUCTS LIABILITY AND THE REASONABLY SAFE PRODUCT (1978) [hereinafter cited as PRODUCTS LIABILITY]. *See also* Donaher, Piehler, Twerski & Weinstein, *The Technological Expert in Products Liability Litigation*, 52 TEX. L. REV. 1303 (1974) (discussing the role of expert witnesses, advocating an increased use); Twerski, Weinstein, Donaher & Piehler, *The Use and Abuse of Warnings in Products Liability—Design Defect Litigation Comes of Age*, 61 CORNELL L. REV. 495 (1976) (discussing the interplay of warnings and defect standards) [hereinafter cited as Twerski, *The Use and Abuse*]; Weinstein, Twerski, Piehler & Donaher, *Product Liability: An Interaction of Law and Technology*, 12 DUQUESNE L. REV. 425 (1974) (dealing with the fundamental concepts forming the basis of the reviewed book).

[2]"Manufacturing community" refers to the engineering, management, and marketing personnel who produce an item that is placed in the stream of commerce.

the practicing bar; instead, it is offered as an overview to those who desire background information.

The authors, members of the two disciplines most closely concerned with products liability—management and the law,[3] pool their resources to "analyz[e] the role of technology and its interface with the law."[4] Specifically, they seek "to examine whether the practice of products litigation [is] based on established legal principles and . . . technological reality as well."[5] With this two-fold purpose in mind, the authors examine the legal responsibilities of the manufacturing community. They conclude that legal practice should complement the decision-making process of engineering and designing products:

> When it comes to evaluating the design process for safety, ... *[t]he designer can plan for the total avoidance of liability.* A product will not be declared defective in design merely because it caused an injury. A court will evaluate design safety by testing the reasonableness of the trade-offs that went into making the final design decisions. It is here that the manufacturer must be sensitive to the weight the courts have placed on the various factors in the risk-utility balancing process.[6]

The authors premise this conclusion on the theory that courts generally apply a risk-benefit calculus in determining liability.[7] Although the risk-benefit analysis conforms neatly with marketing policy, the test possesses certain deficiencies in light of courtroom realities. Before discussing the relative strengths and deficiencies of the risk-utility approach, this Review will provide a brief synopsis of the book's contents.

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[4]PRODUCTS LIABILITY, *supra* note 1, at vii.

[5]*Id.* at viii.

[6]*Id.* at 137 (emphasis added).

[7]*Id.* at 51, 137. The authors apply the seven factors recommended by Dean Wade to guide courts in determining liability. *See* Wade, *Strict Liability of Manufacturers*, 19 SW. L.J. 5, 17 (1965). These seven factors are:

(1) The usefulness and desirability of the product.
(2) The availability of other and safer products to meet the same needs.
(3) The likelihood of injury and its probable seriousness.
(4) The obviousness of danger.
(5) Common knowledge and normal public expectation of the danger.
(6) The avoidability of injury by care in use of the product (including the effect of the instructions or warnings).
(7) The ability to eliminate the danger without seriously impairing the usefulness of the product or making it unduly expensive.

PRODUCTS LIABILITY, *supra* note 1, at 47 (citing Wade, *supra*, at 17).

II. SYNOPSIS

The authors begin their consideration of the value of applying legal principles to the design process with a brief discussion of the three basic theories of products liability: negligence, turning on the conduct of the defendant; strict liability and implied warranty, turning on product quality and contractual expectations; and express warranty and misrepresentation, turning on product performance vis-a-vis explicit representations.[8] Discussing the elements of a tort action, the authors observe that each theory of liability requires proof that the product was defective at the time it left the defendant's hands and that the defect caused the harm. In discussing the basic elements of a products liability claim, the issue of duty is explored and described as a shorthand determination of whether a manufacturer should be held responsible for his product's design. The authors conclude that the questions raised by a court in deciding whether a duty exists should be raised by the manufacturers during the design stage.[9]

Building upon this foundation, the authors discuss the meaning of product defectiveness by contrasting production defects with design flaws.[10] A production defect occurs when a particular product fails to conform with the manufacturer's standard product.[11] Defining a design defect is not so simple; generally, American courts have employed two tests in defining design defectiveness: (1) the consumer expectancy test, and (2) the unreasonably dangerous test.[12] In

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[8]PRODUCTS LIABILITY, *supra* note 1, at 5-16.

[9]*Id.* at 27.

[10]*Id.* at 28-32.

[11]*Id.* at 31. *See* Caterpillar Tractor Co. v. Beck, 593 P.2d 871, 880 (Alaska 1979).

[12]PRODUCTS LIABILITY, *supra* note 1, at 45-51. Because the book is addressed to the manufacturing community, the debate about which test, consumer expectancy or risk-benefit, is preferable only receives brief attention. To illustrate the debate, consider the divergent views of Professors Calabresi and Hubbard. Calabresi contends that strict liability should focus on who has the incentive to make a cost-benefit analysis of accident costs and prevention costs. Minimizing these two concepts is referred to as "optimal deterrence." Calabresi, *Optimal Deterrence and Accidents*, 84 YALE L.J. 656 (1975). Calabresi's conception of strict liability has, in his opinion, two advantages: (1) Because the incentives to reduce costs fall on the parties, as opposed to the "regulator," strict liability can cope with situations where the optimal deterrence is achieved through mutual balancing by producer and consumer, and (2) Because the incentives are on the parties, any error by the "regulator" is presumed not to be the fault of the parties, so no one bears more than a theoretical 50 percent chance of having an error saddled on him. *Id.* at 669-70.

In contradistinction is Professor Hubbard's theory that defects should be defined according to consumer expectations. Hubbard, *Reasonable Human Expectations: A Normative Model for Imposing Strict Liability for Defective Products*, 29 MERCER L. REV. 465, 465 (1978). Due to the vagueness of such concepts as "efficiency," "cost," and "benefit," Hubbard contends that human expectations should prevail over efficiency. Id. at 468-70. According to Hubbard, a product is defective only when it violates those

applying a consumer expectancy test, a manufacturer is liable whenever consumer expectations are frustrated.[13] Expressing a preference for the risk-benefit analysis, the authors explain some of the limitations of the expectancy approach. First, the expectancy test prevents liability when the danger is obvious to the user, regardless of whether the product's risks exceed its utility.[14] By focusing on consumer expectations, courts often overlook the feasibility of alternative designs which have a bearing on the defectiveness of a design.[15] Additionally, the expectancy standard is an unsound method of determining liability when the person injured by the product is not the buyer or user.[16] For example, an injured bystander may not have any expectation about the safety of a product purchased or used by another person.[17] Even if the injured party is the con-

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expectations. Hubbard concedes that efficiency should resolve the issue of defectiveness when both or neither the buyer and seller have reasonable expectations. *Id.* at 477-78. *See* notes 35-39 *infra* and accompanying text.

The distinction between the consumer expectation theory of defectiveness and the unreasonably dangerous approach, however, may be insignificant. Recent commentaries demonstrate that these tests serve some of the same policies. For example, Professor Fischer, a proponent of the risk-benefit test, proposes a multiple factor test that considers consumer expectations as well as those of the manufacturer. Fischer, *Products Liability—The Meaning of Defect*, 39 Mo. L. Rev. 339, 359 (1974). By the same token, factor six of Professor Wade's seven factors deals with the product user's anticipation of danger. Wade, *supra* note 7, at 17. Similarly, proponents of the reasonable consumer expectation theory incorporate elements of the unreasonably dangerous test. Advocating a consumer expectancy test, Professor Shapo has compiled a list of thirteen considerations which include such risk-benefit factors as "implications of the proposed decision for public health and safety generally," "cost to the producer and other sellers of acquiring the relevant information," and "the likely effects on prices and quantities of goods sold." Shapo, *A Representational Theory of Consumer Protection: Doctrine, Function and Legal Liability for Product Disappointment*, 60 Va. L. Rev. 1109, 1370-71 (1974).

A unified view and the one most likely to represent the actual decision-making process is that consumer expectations are incorporated in a risk-balancing test. Some commentators like Professor Hubbard, however, would disavow any unification of the tests.

For an instructive discussion about the consumer expectancy and risk-utility standards, see Caterpillar Tractor Co. v. Beck, 593 P.2d 871 (Alaska 1979) (adopting both standards).

[13]*E.g.*, Muller & Co. v. Corley, 570 S.W.2d 140 (Tex. Civ. App. 1978); Vincer v. Esther Williams All-Aluminum Swimming Pool Co., 69 Wis. 2d 326, 230 N.W.2d 794 (1975). *See generally* Fischer, *supra* note 12, at 348-52; Montgomery & Owen, *Reflections of the Theory and Administration of Strict Tort Liability for Defective Products*, 27 S.C.L. Rev. 803 (1976).

[14]*See* Products Liability, *supra* note 1, at 45-46. *See also* Keeton, *Product Liability and the Meaning of Defect*, 5 St. Mary's L.J. 30, 35 (1973); Montgomery & Owen, *supra* note 13, at 823.

[15]Products Liability, *supra* note 1, at 46-47.

[16]Fischer, *supra* note 13, at 351; Montgomery & Owen, *supra* note 13, at 823.

[17]Montgomery & Owen, *supra* note 13, at 823 n.67. Use of the consumer expecta-

sumer, he may be unable to recover because he is an expert aware of the product's defectiveness.[18] Consequently, consumer expectations may vary on the basis of a consumer's particular knowledge about a product.

The unreasonably dangerous test overcomes the doctrinal deficiencies of the consumer expectation test by examining whether on balance the benefits of a particular design are greater than its risks.[19] Typically, courts applying this test consider the availability and feasibility of alternative designs, as well as the product's use, environment, and risks.[20] The authors, in fact, conclude that *reasonable* consumer expectations are usually determined by balancing risk and utility.[21] Realistically, a consumer expects that a product will be reasonably safe in terms of relative advantages and disadvantages.

The application of a risk-benefit test demonstrates the complementary relationship between warnings and design in producing a reasonably safe product. Obviously, warnings are an inexpensive means of eliminating certain risks because the burden of adding a warning is almost always less than the probability and gravity of harm for failing to warn of the danger.[22] Although warnings are a cheap alternative to product safety, the authors observe that a consumer cannot be expected to understand multiple and complex warnings, the effectiveness of which decreases inversely to increases in multiplicity and complexity.[23] Moreover, the authors discuss the impact that design modifications have on the desirability of warnings:

> A warning may or may not be sufficient, depending on the probability of reducing the risk and the feasibility of the design alternatives that would eliminate the risk or substantially diminish it. Courts sensitive to the very real limitations that affect warnings have indicated their concern that in some instances even the best of warnings may not shield the manufacturer from liability. The vehicle for this instruction to manufacturers has been the design issue.

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tion test in this instance would require the fiction of imputing an expectation to the bystander.

[18]Fischer, *supra* note 12, at 349-50.

[19]*See* Fischer, *supra* note 12, at 348-52; Montgomery & Owen, *supra* note 13, at 815-18. *See also* PRODUCTS LIABILITY, *supra* note 1, at 45-51.

[20]*See* Phillips v. Kimwood Machine Co., 269 Or. 485, 525 P.2d 1033 (1974); Wade, *supra* note 7, at 17.

[21]PRODUCTS LIABILITY, *supra* note 1, at 51.

[22]*Id.* at 62. *See generally* Twerski, *The Use and Abuse*, *supra* note 1.

[23]PRODUCTS LIABILITY, *supra* note 1, at 63; Twerski, *The Use and Abuse*, *supra* note 1, at 514-15.

> *The message to the manufacturing community is clear. The ultimate design of a product must take into account design alternatives together with warnings in deciding how best to reduce the risk of injury.*[24]

Once a defect has been proven, it becomes necessary to link the defect to the harm suffered by the plaintiff. Causation assumes three dimensions in products liability cases: technical causation, classical causation, and proximate cause.[25] Technical causation requires proof that the particular flaw caused the malfunction alleged. In contrast, classical causation requires proof that the same malfunction harmed the plaintiff. Proximate cause is a shorthand description for a court's policy of limiting or extending liability in a particular case. The authors contend that proximate cause should be determined on the basis of whether it is fair to impose liability on a manufacturer because of the risks created by a design defect.[26] They offer the unique suggestion that manufacturers may eliminate the causal link between their product and a victim's injury by stating the limits of a product's life.[27] The manufacturer's failure to specify a product life may be a self-inflicted wound because "the manufacturer's knowledge of product life could help resolve not only the question of how long a product should last but also that of what intervening causes could have contributed to the defect."[28]

The authors also discuss the types of plaintiff conduct, including misuse, assumption of the risk, and failure to inspect, that might reduce or eliminate the extent of a manufacturer's liability, depending on whether the state has a contributory fault or a comparative fault system of liability. Moreover, the book devotes a chapter to a discussion of the potential liabilities of every member of a product's distributive chain, from the producer to the retailer.

The authors summarize that the manufacturer should apply the same risk-benefit factors employed by the courts to the design process.[29] According to the authors, "acceptability" of a product's design should be measured by a risk-benefit calculus, which considers the product's use, potential hazards, and the practicality of safety features, design changes, and effective warnings.[30]

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[24]PRODUCTS LIABILITY, *supra* note 1, at 62 (emphasis added).
[25]*Id.* at 75-85.
[26]*Id.* at 84-85.
[27]*Id.* at 82.
[28]*Id.*
[29]*Id.* at 136-44.
[30]*Id. See also* note 7 *supra* and accompanying text.

III. COMMENT

Clearly, *Products Liability and the Reasonably Safe Product* is a valuable introduction to the legal principles and social policies used to assess the responsibilities and performance of the manufacturing community. The authors approach the subject matter from the viewpoint of the engineer or manufacturer. Their style of writing is well suited to the audience; simple and concise, the text is punctuated with the facts of cases that bring legal principle to life.

At times, however, detail seems to exceed the capabilities of the audience. For example, the authors' proposal of an increased role for the expert witness would seem more appropriate in a book dealing with evidence and trial technique. At other times, important considerations seem to be overlooked; for instance, the Consumer Product Safety Act is appended, yet there is virtually no discussion of its effects on the manufacturing community.

As discussed previously, the book's primary strength is its suggestion that the manufacturers apply the same risk-benefit factors in the design process that the courts use in evaluating design defects. The synthesis of legal practice and technological reality is intuitively sensible. The authors' adoption of the risk-benefit test as a guide to product design satisfies two objectives of tort law: risk spreading and deterrence.[31] Theoretically, the test places the burden on the party who is best prepared to bear the risks of accident and to pass the

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[31] *See* Fischer, *supra* note 12, at 359. Professor Fischer recently outlined how the various risk-benefit factors serve the objectives of risk spreading and safety incentive:

I. Risk Spreading
  A. From the point of view of consumer.
    1. Ability of consumer to bear loss.
    2. Feasibility and effectiveness of self-protective measures.
      a. Knowledge of risk.
      b. Ability to control danger.
      c. Feasibility of deciding against use of product.
  B. From point of view of manufacturer.
    1. Knowledge of risk.
    2. Accuracy of prediction of losses.
    3. Size of losses.
    4. Availability of insurance.
    5. Ability of manufacturer to self-insure.
    6. Effect of increased prices in industry.
    7. Public necessity for the product.
    8. Deterrent effect on the development of new products.
II. Safety Incentive
  A. Likelihood of future product improvement.
  B. Existence of additional precautions that can presently be taken.
  C. Availability of safer substitutes.

Id. at 359.

losses through as a cost of production.[32] Moreover, the test demonstrates the feasibility of adding safety devices to reduce the number and extent of injuries, thereby encouraging manufacturers to design safer products.[33] From the manufacturer's perspective, the risk-benefit factors can be incorporated into the design process to reduce or eliminate liability.[34]

Nevertheless, a manufacturer who bases product liability decision-making on the book may find himself inadequately insulated from potential liability. Some courts may favor a consumer expectancy test because it expresses a preference for humanism.[35] Professor Hubbard recently commented that the "law ought to be humanistic in the sense that liability for product-related injuries ought to be apportioned in accordance with reasonable human expectations."[36] Acknowledging a bias favoring individual rights, Hubbard stated that human expectations and individual rights should prevail even if the product's benefits outweigh its risks.[37] Such reasoning indicates that some courts will not immunize a manufacturer from liability when the design satisfies a risk-benefit analysis.

According to Hubbard, the consumer expectancy test has the added advantage of avoiding the ambiguity "concerning the relative weights of the various goals and the institutional process for balancing the goals."[38] The value of different risk-benefit factors may vary from jurisdiction to jurisdiction.[39] Such inconsistency eliminates the predictability and uniformity that a risk-balancing formula might provide.

Even if a risk-benefit calculus is employed, the courts may not apply the test rigidly because of policy reasons or miscalculation.[40]

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[32]*See* Calabresi & Hirschoff, *Toward a Test for Strict Liability in Torts*, 81 YALE L.J. 1055 (1972); Fischer, *supra* note 12, at 359. *See also* Caterpillar Tractor Co. v. Beck, 593 P.2d 871 (Alaska 1979).

[33]*See* Fischer, *supra* note 12, at 359.

[34]PRODUCTS LIABILITY, *supra* note 1, at 140.

[35]*See* Hubbard, *supra* note 12, at 468-70; Klemme, *The Enterprise Liability Theory of Torts*, 47 U. COLO. L. REV. 153, 191 n.106 (1976).

[36]Hubbard, *supra* note 12, at 465.

[37]*Id.* at 469.

[38]*Id.* at 488.

[39]*See id.*

[40]The manufacturer, however, may benefit from judicial policy excusing manufacturer liability when the risks exceed the benefits. For example, some courts may not impose liability on unavoidably dangerous products if the dangerous propensities were not known at the time of the injury. *See* Montgomery & Owen, *supra* note 13, at 818 n.51. *But see* Calabresi & Hirschoff, *supra* note 32, at 1071. The manufacturer also may benefit from judicial or consumer miscalculation. A victim may not sue because he incorrectly perceives benefits as exceeding risks. Calabresi, *supra* note 12, at 658-59. A judicial error also may excuse liability if the court miscalculates risks and benefits. *Id.* at 658. Frequent errors of this type may discourage manufacturers from taking steps to reduce accidents.

The authors assume that courts generally will excuse liability at the point where the benefits exceed the risks.[41] Some courts, however, may not excuse liability, regardless of whether the benefits are greater than the costs.[42] A court may affix liability upon the manufacturer in any case where proximate cause exists because of "the manufacturer's superior position to recognize the risk of such injuries and then to insure against or make plans to absorb the costs of resulting losses."[43] Succinctly stated, a court may consider the manufacturer to be a better risk spreader than the victim. Moreover, liability may be shifted because the courts erred in calculating the advantages and disadvantages of a particular design.[44] Such an error may result in manufacturer liability, notwithstanding the cost effectiveness of a design.

In sum, the manufacturer and engineer should be warned that the authors' test does not insure against liability for defective design. Despite the practical value of applying the risk-benefit calculus, courts may apply the consumer expectancy standard because they prefer individual rights over efficiency. Assuming that courts adopt the risk-benefit test, manufacturers still may face liability because they are viewed as better risk spreaders or because of judicial miscalculation, regardless of whether the benefits exceed the risks. Notwithstanding these weaknesses in the authors' approach, the book provides a manufacturer with a practical guide for designing products free from the defects warranting liability.

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[41]This is implicit in the authors' belief that by prebalancing, liability can be avoided because a reasonable balance of risk and utility has been achieved already.

[42]*See* Calabresi, *supra* note 12, at 658; Montgomery & Owen, *supra* note 13, at 818.

[43]*See* Montgomery & Owen, *supra* note 13, at 818-19 n.51.

[44]*See* Calabresi, *supra* note 12, at 658.