Journal of Air Law and Commerce

Volume 46 | Issue 2 Article 7

1981

The Model Uniform Product Liability Act - Basic Standards of Responsibility for Manufacturers

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THE MODEL UNIFORM PRODUCT LIABILITY ACT—BASIC STANDARDS OF RESPONSIBILITY FOR MANUFACTURERS

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ON OCTOBER 13, 1979, the Department of Commerce, through its Task Force on Product Liability and Accident Compensation, issued the Model Uniform Product Liability Act (UPLA).[1] The objective of the UPLA is to resolve the following problem areas that have developed in the field of product liability: liability insurance ratemaking procedures,[2] unsafe manufacturing practices,[3] and uncertainties in the tort-litigation system.[4] It is hoped that the adoption of the UPLA, by bringing uniformity and stability into the law of product liability, will stabilize liability insurance rates and will help to insure that consumers injured by unreasonably unsafe products receive reasonable compensation for their injuries.[5]

The most controversial aspect of product liability litigation has been the issue of defining the basic standards of responsibility to which product manufacturers are to be held.[6] The Task Force has concluded that most of the controversy results from the fact that

[1] MODEL UNIFORM PRODUCTS LIABILITY ACT, 44 Fed. Reg. 62,714 (1979) [hereinafter cited as UPLA].

[2] 44 Fed. Reg. 62,714 (1979). In 1975 a crisis arose concerning liability insurance for manufacturers and businessmen. Many writers alleged that such insurance had become unavailable or unaffordable. This situation could have had serious consequences for the businessman and the consumer: many businesses would have had to terminate because they would have been unable to obtain coverage, injured consumers would have been left uncompensated, and manufacturers would have been hesitant to produce potentially dangerous products which are useful to society. 43 Fed. Reg. 14,612 (1978).

[3] The problem primarily concerns small businesses which are unable to devote sufficient resources to this area. 43 Fed. Reg. 14,615 (1978).

[4] Product liability rules are constantly changing in each of the fifty different jurisdictions. Many courts have come to regard product liability law as nothing more than a compensation device for injured consumers. The tort-litigation system, however, was not designed to serve this purpose. The courts must balance the economic burden on the manufacturers to produce a safe product against the probabilities that the product may cause injury. 43 Fed. Reg. 14,616 (1978).

[5] 44 Fed. Reg. 62,714 (1979).

[6] *Id.* at 62,721.

section 402A of the RESTATEMENT (SECOND) OF TORTS[7] focuses primarily on manufacturing defects and not on defects concerning design or the duty to warn.[8] Courts, therefore, have been left with little guidance while attempting to define standards of responsibility pertaining to design,[9] and duty to warn, defects.[10] Conflict among courts subsequently developed as to whether a strict liability or negligence standard should be imposed on manufacturers whose products contained such defects.[11]

Section 104 of the UPLA seeks to dispel some of this confusion by setting forth the following criteria relating to the basic standards of responsibility to be imposed on manufacturers of a defective product. The UPLA divides product defects into four categories:

> A product may be proven defective if, and only if:
> (1) It was unreasonably unsafe in construction (Subsection A);
> (2) It was unreasonably unsafe in design (Subsection B);
> (3) It was unreasonably unsafe because adequate warnings or instructions were not provided (Subsection C); or
> (4) It was unreasonably unsafe because it did not conform to the product seller's express warranty (Subsection D).[12]

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[7] See note 32 *infra*.

[8] 44 Fed. Reg. 62,714, 62,722 (1979). *See* Epstein, *Products Liability: The Search for the Middle Ground*, 56 N.C.L. REV. 643, 648 n.16 (1978) [hereinafter cited as Epstein]. The author notes that the definition of "defect" in section 402A considers a product to be defective "only where the product is, at the time it leaves the seller's hands, in a condition not contemplated by the ultimate consumer, which will be unreasonably dangerous to him." By strictly applying this definition, the expansion of design defect cases would be effectively precluded. *Id.*

[9] Barker v. Lull Eng'r Co., Inc., 20 Cal. 3d 413, 424, 573 P.2d 443, 450, 143 Cal. Rptr. 225, 232 (1978) (liability imposed by merely showing product's defectiveness); Kerns v. Engelke, 76 Ill. 2d 154, 390 N.E.2d 859, 865 (1979) (manufacturer not required to produce product which represents ultimate in safety); Phillips v. Kimwood Mach. Co., 269 Or. 485, 489, 525 P.2d 1033, 1037 (1974) (unreasonable dangerousness of design determined by considering surrounding circumstance of manufacturer's knowledge at time article sold).

[10] Jacobson v. Colorado Fuel & Iron Corp., 409 F.2d 1263, 1271 (9th Cir. 1969) (imposed duty to warn of dangers in non-defective but potentially harmful products); Wagner v. Larson, 257 Iowa 1202, 136 N.W.2d 312, 329 (1965) (duty to warn relates to latent defect, not to defect which is well known); Smith v. Squibb & Sons, Inc., 405 Mich. 79, 273 N.W.2d 476, 480 (1979) (breach of duty for failure to warn determined by standard of reasonable care under circumstances).

[11] See notes 85-87 *infra* and accompanying text.

[12] 44 Fed. Reg. 62,714, 62,721 (1979).

Within these four categories, two different standards of liability are imposed on manufacturers. Strict liability is imposed for defects in construction and for breach of an express warranty,[13] and a negligence standard is imposed for defects in design and for failure to provide an adequate warning.[14]

This comment examines the effect the UPLA will have on the common law developments in the area of product liability concerning the standards of responsibility for manufacturers. Each type of defect is treated separately in order to show the extent to which the Act's proposals will alter the way courts have treated each defect in the past. Finally, this paper offers an evaluation of Section 104's effectiveness in alleviating some of the problems that have developed in this area.

I. UPLA—ROOTS IN COMMON LAW

Product liability law has developed in response to our society's industrial and technological development.[15] The mass production of goods created the need for an effective cause of action in tort for consumers injured by defective products.[16] The remedy first available to such consumers was based upon contract law and the concept of negligence.[17] This remedy, however, posed several difficulties for potential plaintiffs since a consumer could not bring a negligence-based products liability suit unless he stood in contractual privity with the manufacturer.[18] Justice Cardozo's landmark opinion in *MacPherson v. Buick Motor Co.*[19] made this remedy more widely available to consumers by concluding that despite a lack of privity, an injured consumer could maintain a

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[13] *Id.* at 62,722.

[14] *Id.*

[15] *See generally* L. FRUMER & M. FRIEDMAN, 1 PRODUCTS LIABILITY 1-1 to 1-10 (1979) [hereinafter cited as FRUMER & FRIEDMAN].

[16] *See* Prosser, *The Assault Upon the Citadel*, 69 YALE L.J. 1099, 1110-14 (1960) [hereinafter cited as Prosser, *The Assault Upon The Citadel*]; Prosser, *The Fall of the Citadel*, 50 MINN. L. REV. 791, 799-800 (1966) [hereinafter cited as Prosser, *The Fall of the Citadel*].

[17] Comment, *Comparative Negligence and Strict Products Liability: Butaud v. Suburban Marine & Sporting Goods, Inc.*, 38 OHIO ST. L.J. 883, 884 (1977) [hereinafter cited as Comment, *Comparative Negligence*].

[18] *Id.*

[19] 217 N.Y. 382, 111 N.E. 1050 (1916).

direct negligence action against the manufacturer.[20] Basic principles of negligence, however, continued to be used with little modification to determine liability in product cases.[21] Under the negligence based remedy, the manufacturer was held responsible for injuries caused by the ordinary use of his product whenever a defect brought about the plaintiff's harm.[22]

Gradually, attempts were made to expand the theories of recovery to encompass a concept of strict liability independent of any negligence analysis.[23] The law of warranty was the original basis used to expand the strict product liability theory.[24] In taking this approach, the courts theorized that the manufacturer or seller expressly or impliedly warranted the safety of the product.[25] The seller was held to a standard of strict liability if the injured consumer relied upon the statements and the statements proved to be false. Various limitations,[26] however, were placed upon this rule of liability.

The remedy of strict liability for product defects came into its own in the early 1960's. In *Henningsen v. Bloomfield Motors,*

[20] *Id.* at 389, 111 N.E. at 1053.

[21] Epstein, *supra* note 8, at 649.

[22] *See* Escola v. Coca-Cola Bottling Co., 24 Cal. 2d 453, 150 P.2d 436 (1944).

[23] Comment, Comparative Negligence, *supra* note 17, at 884-85.

[24] *See* Baxter v. Ford Motor Co., 179 Wash. 123, 35 P.2d 1090 (1934). In *Baxter* the manufacturer distributed literature which stated that glass in the windshield of an automobile was "shatterproof." The court imposed strict liability upon the manufacturer when the consumer subsequently was injured. The consumer testified that he read and relied upon the manufacturer's statements. *See also* Prosser, *supra* note 16, at 1124-34.

[25] Pritchard v. Liggett & Myers Tobacco Co., 295 F.2d 292 (3d Cir. 1961) (cigarettes); Hansen v. Firestone Tire & Rubber Co., 276 F.2d 254 (6th Cir. 1960) (tires): Arfons v. E.I. du Pont de Nemours & Co., 261 F.2d 434 (2d Cir. 1958) (dynamite); Maecherlein v. Sealy Mattress Co., 145 Cal. App. 2d 275, 302 P.2d 331 (1956) (mattress); Lane v. C.A. Swanson & Sons, 130 Cal. App. 2d 210, 278 P.2d 723 (1955) (boned chicken); Hamon v. Digliani, 148 Conn. 710, 174 A.2d 294 (1961) (detergent); Connolly v. Hagi, 24 Conn. Sup. 198, 188 A.2d 884 (1963) (automobile); Spiegal v. Saks 34th Street, 43 Misc. 2d 1065, 252 N.Y.S.2d 852 (Sup. Ct. 1964) (cosmetics); Rogers v. Toni Home Permanent Co., 167 Ohio St. 2d 244, 147 N.E.2d 612 (1958) (permanent wave solution).

[26] Generally the courts have held that the statement made by the manufacturer must be a representation of a fact, and not mere "puffing" or sales talk. The representation must be made by the defendant or by one of his agents. Furthermore, the defendant must intend that the statement reach the plaintiff. Finally, the plaintiff must establish that he relied upon the manufacturer's representations. *See* Prosser, *The Fall of the Citadel, supra* note 16, at 838-40.

Inc.[27] the New Jersey Supreme Court held both the automobile manufacturer and the dealer liable to the injured consumer without any showing of negligence or privity of contract.[28] Three years later Justice Traynor, writing the majority opinion in *Greenman v. Yuba Power Products, Inc.*,[29] went beyond *Henningsen* and concluded that strict liability did not require a basis in contract warranty but could be based on strict liability in tort.[30] A third judicial change occurred in the late 1960's when courts began to apply a strict liability theory of recovery on behalf of casual bystanders who were injured due to a product's defect.[31] Finally in 1965, the RESTATEMENT (SECOND) OF TORTS adopted the principles of strict liability by adding section 402A, which requires that before a seller can be held strictly liable he must sell a product in a "defective condition unreasonably dangerous" to the user.[32]

One of the principles underlying strict product liability is that one who engages in the business of selling a product impliedly represents that the product it places in the stream of commerce is free of defects.[33] In establishing a claim based upon strict liability, a plaintiff must show that the product was defective when the de-

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[27] 32 N.J. 358, 161 A.2d 69 (1960).

[28] 161 A.2d at 77, 100.

[29] 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1963).

[30] 377 P.2d at 900.

[31] Elmore v. American Motors Corp., 70 Cal. 2d 578, 75 Cal. Rptr. 652, 451 P.2d 84 (1969).

[32] RESTATEMENT (SECOND) OF TORTS § 402A (1965):

> § 402A. Special Liability of Seller of Product for Physical Harm to User or Consumer
>
> (1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability or physical harm thereby caused to the ultimate user or consumer, or to his property, if
>
> (a) the seller is engaged in the business of selling such a product, and
>
> (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold.
>
> (2) The rule stated in Subsection (1) applies although
>
> (a) the seller has exercised all possible care in the preparation and sale of his product, and
>
> (b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.

[33] Suter v. San Angelo Foundry & Mach. Co., 81 N.J. 150, 406 A.2d 140, 149 (N.J. 1979), *citing* Herbstman v. Eastman Kodak Co., 68 N.J. 1, 342 A.2d 181 (1975).

fendant placed it into the stream of commerce.[34] Determining whether a product is defective has never been easy.[35] Many courts have adopted section 402A as a basis for imposing strict product liability, but the uniformity ends here.[36] Considerable differences of opinion have developed concerning the definitions of the terms "defective"[37] and "unreasonably dangerous."[38] There is also disagreement as to whether a plaintiff should be required to prove that the product is *both* defective and unreasonably dangerous.[39] Dean John Wade, who was one of the reporters for section 402A, has stated that both terms serve a clear purpose in determining whether or not a seller should be held liable for the injury his product causes to a consumer.[40]

The UPLA adopts similar terms in defining the standards of

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[34] 406 A.2d at 150.

[35] *See* L. FRUMER & M. FRIEDMAN, 2 PRODUCTS LIABILITY 3B-126 (1979).

[36] *See* Fischer, *Products Liability—Applicability of Comparative Negligence to Misuse and Assumption of Risk*, 43 MO. L. REV. 643, 646 (1978) [hereinafter cited as Fischer].

[37] *Id.* at 646; Keeton, *Product Liability and the Meaning of Defect*, 5 ST. MARY'S L.J. 30, 35-36 (1973) [hereinafter cited as Keeton]; Keeton, *Manufacturer's Liability: The Meaning of "Defect" in the Manufacture and Design of Products*, 20 SYRACUSE L. REV. 559, 562-65 (1969).

[38] Welch v. Outboard Marine Corp., 481 F.2d 252, 254 (5th Cir. 1973) (reasonable seller would not sell product with knowledge of risks involved or if risks greater than reasonable buyer would expect); Cronin v. J.B.E. Olson Corp., 8 Cal. 3d 121, 134, 501 P.2d 1153, 1162, 104 Cal. Rptr. 433, 443 (1973) (product dangerous to an extent beyond that contemplated by the ordinary consumer with knowledge common to community). *See also* Phillips v. Kimwood Mach. Co., 269 Or. 485, 494, 525 P.2d 1033, 1036 (1974) (reasonable person would not put product into stream of commerce with knowledge of harmful characteristics); Walkowiak, *Product Liability Litigation and the Concept of Defective Goods: "Reasonableness" Revisited?*, 44 J. AIR L. & COM. 705, 714 (1979) [hereinafter cited as Walkowiak].

[39] See notes 92-95 *infra* and accompanying text.

[40] Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825, 830-33 (1973) [hereinafter cited as Wade]. Dean Wade contends that the two terms may seem redundant, yet both were employed for a reason. The natural application of the word "defective" would be limited to the situation where something goes wrong in the manufacturing process. It would be difficult to apply the term to defects concerning design and to inadequate warnings. In addition, a product may be defective yet not likely to cause injury. The term "unreasonably dangerous" when used alone presents additional difficulties. It connotes ultrahazardous or abnormally dangerous products, which in turn gives the impression that the plaintiff must prove that the product is unusually or extremely dangerous.

responsibility for manufacturers.[41] It differs, however, in one important aspect. Instead of requiring the product to be *both* "defective" and "unreasonably dangerous" before liability may be imposed, the UPLA uses the term "defective" to encompass each of the four types of unreasonably unsafe products.[42] By using the word "defective" as a generic term, the UPLA may arguably be interpreted as treating the terms "defective" and "unreasonably unsafe" as being synonymous. The treatment of these terms could have been clarified had the Act defined the roles that the judge and jury are to play in a product liability case.[43] The failure to define these roles suggests that the two terms are not to be given separate consideration. Thus, the primary determination in a product liability case will be for the trier of fact to decide whether the product is unreasonably unsafe. Only if the product is determined to be "unreasonably unsafe" can it then be labeled "defective".

Since much of the controversy in product liability suits concerns the determination of whether the product is unreasonably dangerous, various writers have proposed different tests for making this determination.[44] By adopting the synonymous term "unreasonably unsafe," the UPLA accepts some of the tests that have been proposed and rejects others. The analysis of the Act expressly rejects the consumer expectation test.[45] This test imposes liability

[41] The UPLA substitutes the term "unreasonably unsafe" for "unreasonably dangerous."

[42] 44 Fed. Reg. 62,714, 62,721 (1979).

[43] In actions based on strict liability for an abnormally dangerous activity, the judge traditionally determines whether liability should be imposed since issues of general social policy are involved. In product liability cases the courts seem to have approached the problem differently. In these cases the plaintiff must convince the jury that the product was "defective" or "unreasonably dangerous." A problem arises when the case involves a design defect. Policy issues become very important since a whole class of products will be labeled unsafe. In these instances, the court must make several initial determinations in deciding whether the case should be submitted to a jury. *See* Wade, *supra* note 40, at 838-39. It is unclear under the UPLA whether the court must make an initial inquiry concerning relevant policy issues. The Act suggests that the trier of fact, regardless of whether it is the judge or the jury, must weigh the policy issues involved. As a result, determining whether the product is "unreasonably unsafe" and thus "defective" involves only a single analysis.

[44] See notes 46-53 *infra* and accompanying text.

[45] 44 Fed. Reg. 62,724 (1979). See notes 125-33 *infra* and accompanying text. The test stems from the attempts of various courts to interpret Comment i of the RESTATEMENT (SECOND) OF TORTS § 402A. Comment i states that to be unreasonably dangerous the "article sold must be dangerous to an extent

if the product fails to meet the ordinary consumer's reasonable expectations as to the safety of the product.[46] Several noted authorities support this test[47] by arguing that the consumer's expectations of the product's performance should be indicative of the type of supplier conduct that would be acceptable.[48] Conversely, the UPLA accepts the risk-utility test.[49] This test requires balancing the gravity and likelihood of the harm and the burden of taking precautions against the utility of the product.[50] The risk-utility approach is used by many courts in determining negligence liability;[51] moreover, various courts have readily adopted this approach in apply-

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beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics."

[46] *See* Walkowiak, *supra* note 38, at 714.

[47] *See* Phillips, *A Synopsis of the Developing Law of Products Liability*, 28 DRAKE L. REV. 317, 342 (1978-1979) [hereinafter cited as Phillips]; Twerski and Weinstein, *A Critique of the Uniform Product Liability Law—A Rush to Judgment*, 28 DRAKE L. REV. 221, 230 (1978-1979) [hereinafter cited as Twerski].

[48] Phillips, *supra* note 47, at 343.

[49] 44 Fed. Reg. 62,714, 62,723 (1979).

[50] Professor Wade has suggested that seven factors be considered in making the risk-utility determination:

1. The usefulness and desirability of the product—its utility to the user and to the public as a whole.
2. The safety aspects of the product—the likelihood that it will cause injury and the probable seriousness of the injury.
3. The availability of a substitute product which would meet the same need and not be as unsafe.
4. The manufacturer's ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive to maintain its utility.
5. The user's ability to avoid danger by the exercise of care in the use of the product.
6. The user's anticipated awareness of the damages inherent in the product and their avoidability, because of general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instructions.
7. The feasibility, on the part of the manufacturer, of spreading the loss by setting the price of the product or carrying liability insurance.

Wade, *supra* note 40, at 837-38.

[51] Dorsey v. Yoder Co., 331 F. Supp. 753 (E.D. Pa. 1971), *aff'd*, 474 F.2d 1339 (3d Cir. 1973); Rios v. Niagara Mach. & Tool Works, 12 Ill. App. 3d 739, 299 N.E.2d 86 (1973); Sut Kowski v. Universal Marion Corp., 5 Ill. App. 3d 313, 381 N.E.2d 749 (1972); Coger v. Mackinaw Prod. Co., 48 Mich. App. 113, 210 N.W.2d 124 (1973); Finnegan v. Havir Mfg. Corp., 60 N.J. 413, 290 A.2d 286 (1972); Phillips v. Kimwood Mach. Co., 269 Or. 485, 525 P.2d 1033 (1974).

ing strict liability.[52] Balancing the risk-utility factors will help to determine whether a product is to be labeled "unreasonably unsafe." Like the term "unreasonably dangerous," the term "unreasonably unsafe" will need further elaboration before it can serve as a useful standard in measuring the worthiness of various product liability claims.[53] The meaning of "unreasonably unsafe" takes on special significance in the context of the UPLA's four categories of defective products, since the threshold consideration in every product liability case will be to determine whether the product is "unreasonably unsafe".

II. THE FOUR CATEGORIES OF DEFECTIVE PRODUCTS UNDER THE UPLA

A. *The Product Was Unreasonably Unsafe in Construction*

Subsection A of section 104 of the RESTATEMENT imposes strict liability on the manufacturer for defects that result from the manufacturing process.[54] The most significant aspect of imposing strict liability for defects in construction is that the seller will be liable regardless of whether he was in any way at fault or whether he exercised the greatest possible care.[55] Attention will be directed away from the manufacturer's conduct and instead will focus on the injury-producing product.[56] Strict liability eliminates the requirement that the manfacturer "knew or should have known" of the defect in the product.[57] Since section 104 imposes strict liability for releasing a defectively manufactured product into the stream of commerce, the plaintiff is not required to establish that the defendant failed to exercise reasonable care.

Innumerable cases have been decided by imposing strict lia-

[52] Dorsey v. Yoder Co., 331 F. Supp. 753 (E.D. Pa. 1971), *aff'd*, 474 F.2d 1339 (3d Cir. 1973); Suter v. San Angelo Foundry & Mach. Co., 31 N.J. 150, 406 A.2d 140 (N.J. 1979); Rios v. Niagara Mach. & Tool Works, 12 Ill. 3d 739, 299 N.E.2d 86 (1973); General Motors Corp. v. Turner, 584 S.W.2d 844 (Tex. 1979).

[53] See Keeton, *supra* note 37, at 32.

[54] 44 Fed. Reg. 62,714, 62,722 (1979).

[55] Montgomery and Owen, *Reflections on the Theory and Administration of Strict Tort Liability for Defective Products*, 27 S.C.L. REV. 803, 808 (1976) [hereinafter cited as Montgomery].

[56] *Id.* at 808-09.

[57] *See* Walkowiak, *supra* note 38, at 718.

bility for an injury arising from a defective condition in the manufacturing process.[58] The fact that the manufacturer places the goods on the market and solicits their sale through advertising and attractive packaging has always presented a convincing argument for imposing strict liability for such defects.[59] The manufacturer intends and expects the consumer to purchase his product and to use it in reliance upon his assurances of safety; therefore, the manufacturer should not be able to avoid the responsibility when the use of the product leads to injury.[60] Prior court decisions have consistently imposed strict liability for manufacturing defects.[61] Furthermore, imposing strict liability also appears to adhere to the dictates of section 402A of the RESTATEMENT (SECOND) OF TORTS.[62]

In construction defect cases, the obvious assumption is that the defect has arisen because the manufacturer has been negligent in the production process.[63] The manufacturer may not be negligent, however, where the injury is due to a latent defect that was not capable of detection during production.[64] Additionally in some instances thorough testing could result in partial or total destruc-

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[58] *See* FRUMER & FRIEDMAN, *supra* note 15, at 3B-118.3-30.

[59] *See* Prosser, *supra* note 16, at 1122.

[60] *Id.*

[61] Sturm, Ruger & Co. v. Day, 594 P.2d 38 (Alaska 1979) (revolver); Walczak v. General Motors Corp., 34 Ill. App. 3d 7731, 340 N.E.2d 684 (1976) (steering malfunction); Tweedy v. Wright Ford Sales, Inc., 31 Ill. App. 3d 72, 334 N.E.2d 417 (1975) (brakes failed); Novick v. Textron, Inc., 375 So. 2d 730 (La. App. 1979) (rotor system in helicoper tail); Lahocki v. Contee Sand & Gravel Co., 398 A.2d 490 (Md. App. 1979) (roof of van); Roy Matson Truck Lines, Inc. v. Michelin Tire Corp., 277 N.W.2d 361 (Minn. 1979) (tire); Holkestad v. Coca Cola Bottling Co. of Minn., Inc., 180 N.W.2d 860 (Minn. 1970) (exploding bottle); Russell v. Ford Motor Co., 81 Or. 597, 575 P.2d 1383 (1978) (axle); Rupe v. Durbin Corco, Inc., 557 S.W.2d 742 (Tenn. App. 1976) (loader).

[62] *See* Wade, *Strict Tort Liability of Manufacturers*, 19 Sw. L.J. 5, 10 (1965).

[63] *See* Phillips, *supra* note 47, at 344.

[64] *Id.* at 345. *See, e.g.*, Pabon v. Hakensack Auto Sales, Inc., 63 N.J. Super. 476, 164 A.2d 773, 783-84 (1960). In *Pabon* the plaintiff unsuccessfully sought damages from an automobile manufacturer for injuries sustained when the steering mechanism on his automobile locked. The plaintiff claimed that defective ball bearings were used in manufacturing the automobile. The court rationalized that the manufacturer had received the ball bearings fully assembled from another reputable manufacturer. Furthermore, the latent defect was not discoverable by reasonable inspection methods. *Id.* at 783.

tion of the product or could make its cost prohibitively expensive.[65] The UPLA fails to allow for situations where the defect was incapable of being detected during the production process. Imposing strict liability in these situations would be unnecessarily harsh.

Before the manufacturer can be held responsible under a strict liability theory, a standard must be established by which a defective product may be measured.[66] As with the theory of negligence, liability for an injury may not be imposed unless the product fails to meet this standard.[67] The UPLA provides that the manufacturer himself will provide the standard for comparison.[68] Any deviation from his own plans or specifications will be considered a manufacturing defect.

There has been significant criticism of judging the manufacturer by his own standards rather than by the standards of the industry.[69] One of the criticisms stems from the possibility that a manufacturer could be penalized for building into his product a high safety standard not required or followed by the industry.[70] It is the position of the UPLA that the long-term effects of using this standard will be advantageous to the manufacturer. The drafters of the UPLA reason that the manufacturer who imposes a higher standard on himself may occasionally be subjected to liability for manufacturing defects, but it will be less likely that his whole product line will be found unreasonably unsafe in its design.[71] This rationale overlooks one factor. Judging a manufacturer by his own standards rather than by the standards of the industry, significantly increases the risk that a manufacturer who has imposed higher standards on himself will be found liable for a construction defect. Since the UPLA has imposed a standard of strict liability for producing products with such defects, this greatly increases the potential risk that the manufacturer will be subjected

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[65] *Id. See* Cheli v. Cudahy Bros. Co., 267 Mich. 690, 255 N.W. 414, 415 (1934) (meat packer not liable for consumer's death caused by ingestion of trichinosis pork since complete sterilization of pork would cause loss of freshness).

[66] *See* Walkowiak, *supra* note 38, at 712.

[67] *Id.*

[68] 44 Fed. Reg. 62,714, 62,723 (1979).

[69] *See* Twerski, *supra* note 47, at 225; Phillips, *supra* note 47, at 345.

[70] *See* Twerski, *supra* note 47, at 225.

[71] 44 Fed. Reg. 62,714, 62,723 (1979).

to liability for taking additional precautions. The drafters contend that by taking the extra precautions it is less likely that the manufacturer will be found liable for producing a product which is unreasonably unsafe in its design. The UPLA, however, imposes a negligence standard on design defects.[72] The negligence standard employed by the UPLA places the burden of proof on the injured claimant, not on the manufacturer.[73] Therefore, the fact that a manufacturer's total liability would appear to increase if he imposes a higher standard on himself might destroy his incentive to take extra precautions.

Judging a manufacturer by his own standards will require imposing liability for any flaw in the product which causes an injury to the plaintiff. As one authority has noted, it is inevitable that certain structural irregularities or flaws will appear in any metallic structure.[74] Some manufacturers often introduce these irregularities to enhance certain properties of the structure.[75] In instances such as this, the standards imposed on the industry as a whole should clearly be examined in determining whether the manufacturer should be subject to liability. A risk-utility analysis would be helpful in these situations. If the usefulness and desirability of the product outweigh the likelihood of injury, it should be sufficient that the manufacturer has met the industry's standards rather than the higher standards he has imposed on himself.

Even though the plaintiff shows that the product deviates from the manufacturer's own plans and specifications, the product must also be proven "unreasonably unsafe." Every minor variation will not make the product unreasonably unsafe. The variation must be material, and it must be the cause of the plaintiff's harm.[76] Thus, liability may be imposed for a manufacturing defect if the plaintiff satisfies a two-step process: first, he must show that the product did not meet the standards which the manufacturer has set

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[72] *Id.* at 62,722.

[73] *Id.* at 62,723.

[74] Weinstein, Twerski, Piehler & Donaher, *Product Liability: An Interaction of Law and Technology*, 12 DUQUESNE L. REV. 425, 430 n.11 (1974).

[75] *Id.* The authors note that additional elements are often added intentionally to form alloys which are stronger than the parent metal (brass is an example of a substitutional solid solution produced by the addition of zinc and copper).

[76] 44 Fed. Reg. 62,714, 62,723 (1979).

for himself; and, second, he must show that the defect in the product rendered it unreasonably unsafe—that it was a material defect and that it was the cause of the plaintiff's injury. Once these two factors have been established, the product may be considered defective. The UPLA's analysis for determining whether the product is unreasonably unsafe is clear and concise. It avoids the use of the consumer expectation test,[77] and it also avoids the necessity of imputing knowledge of the defective condition to the manufacturer under a negligence standard.[78]

B. *The Product Was Unreasonably Unsafe in Design*

Unlike the strict liability standard imposed on manufacturers for construction defects, the UPLA imposes a negligence standard on manufacturers for injuries caused by products which are unreasonably unsafe in their design.[79] Manufacturing defects are usually inadvertent, whereas design defects generally stem from the intended result of the manufacturing process.[80] A design defect usually affects the manufacturer's entire line of products and results from a conscious choice of the manufacturer based on his desire to balance the need for safety against such factors as utility, attractiveness and cost.[81] A design defect may take various forms: the absence of safety devices, defects in a formula, dangerous side effects, or a product's giving way in an unexpectedly dangerous manner.[82] The drafters of the UPLA state that imposing a negligence standard for design defects is consistent with prior court decisions.[83] There exists, however, evidence supporting a contrary conclusion.

As states began adopting the principles of strict liability, many courts applied them to design as well as to manufacturing defects.[84]

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[77] See notes 45-48 *supra* and accompanying text.

[78] *See generally* Walkowiak, *supra* note 34, at 714.

[79] 44 Fed. Reg. 62,714, 62,723 (1979).

[80] *See* Phillips, *The Standard for Determining Defectiveness in Products Liability*, 46 CINN. L. REV. 101, 103 (1977).

[81] *See* Phillips, *supra* note 47, at 345.

[82] *Id.* at 347.

[83] 44 Fed. Reg. 62,714, 62,723 (1979).

[84] Shelak v. White Motor Co., 581 F.2d 1155 (5th Cir. 1978) (truck); Barker v. Lull Eng'r Co., 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978) (high lift loader); Pike v. Frank G. Hough Co., 85 Cal. Rptr. 629, 467 P.2d

Other courts have refused to follow this trend.[85] There are significant similarities in analyzing a cause of action based on strict liability which arises from the design of a defective product and a cause of action based on negligence, but differences between the theories do exist.[86] In a negligence action, the issue is whether the manufacturer's conduct matches that of the reasonably prudent manufacturer.[87] In a strict liability action, the manufacturer's conduct is irrelevant. The issue is simply whether the product was too dangerous.[88] In a negligence action, the manufacturer also is assumed to have had knowledge of all foreseeable risks; in a strict liability action, the manufacturer's knowledge is irrelevant.[89]

The requirement of section 402A of the RESTATEMENT (SECOND) OF TORTS that the product must be "unreasonably dangerous" seems to be the basis of the conflict in determining whether to apply a strict liability or a negligence standard to design defects. The courts and writers who espouse the strict liability standard reject the "unreasonably dangerous" requirement of 402A by requiring that the plaintiff need only establish the product's defectiveness.[90] Other authorities maintain that the term "unreason-

229 (1970) (paydozer); Rindlisbaker v. Wilson, 95 Idaho 752, 519 P.2d 421 (1974) (fertilizer applicator); Blevins v. Cushman Motors, 551 S.W.2d 602 Mo. 1977) (golf cart).

There are several reasons for applying a strict liability standard for design defects. First, even though design defects may often be attributable to fault, it is generally difficult for the injured consumer to establish fault. Second, products will be made safer if strict liability is imposed on manufacturers for design defects. Third, the manufacturer can effectively distribute the risk by accepting responsibility for losses from accidents. *See* V. WALKOWIAK, THE UNIFORM PRODUCT LIABILITY ACT 3-7, 3-8 (1980).

[85] Phipps v. General Motors Corp., 278 Md. 337, 363 A.2d 955 (1976) (automobile accelerator mechanism); Fredericks v. General Motors Corp., 274 Md. 288, 336 A.2d 118 (1975) (automobile); Suter v. San Antonio Foundry & Mach. Co., 81 N.J. 150, 406 A.2d 140 (1979) (industrial sheet metal rolling machine); General Motors Corp. v. Turner, 567 S.W.2d 812 (Tex. Civ. App.—Beaumont 1978, no writ) (automobile roof).

[86] *See* Montgomery, *supra* note 55, at 828-29.

[87] *Id.*

[88] *Id.*

[89] *Id.*

[90] Hagans v. Oliver Mach. Co., 576 F.2d 97 (5th Cir. 1978) ("unreasonably dangerous" and "defective" are synonymous); Barker v. Lull Eng'r Co., Inc., 20 Cal. 3d 413, 143 Cal. Rptr. 225, 573 P.2d 443 (1978) (plaintiff required only to show product's defectiveness); Keeton, *supra* note 37, at 32 (unreasonably dangerous intended only as definition of defect); Montgomery,

ably dangerous" plays an important role in all design defect cases.[91] It should be noted, however, that most of the courts which apply a strict liability standard also require that an evaluation be made of the risk-utility factors.[92] The risk-utility test is similar to the balancing approach employed by most courts in determining the issue of "reasonableness" in the negligence case.[93]

In *Barker v. Lull Engineering Co., Inc.*,[94] the California Supreme Court held that in a design defect case the plaintiff should not be required to prove that a product was unreasonably dangerous as well as defective.[95] The court determined that a product would be labeled defective if the plaintiff satisfies either of two tests.[96] The first test requires the plaintiff to show only that the design did not perform as safely as the ordinary consumer would expect when it was used in a foreseeable manner.[97] The product is defective if it fails this "consumer expectation" test.

Even if the product satisfies the consumer expectation test, it may still be labeled defective if it fails the second test, which involves a risk-utility analysis. Under this test, the plaintiff must prove that the product proximately caused his injury.[98] After this fact is established, the defendant has the burden of showing that the utility of the product outweighed the risks involved.[99] The court's stated purpose for this formulation was to relieve the injured plaintiff of the onerous evidentiary burdens which are in-

supra note 55, at 842 (plaintiff should not be required to prove both defect and unreasonable dangerousness—only defectiveness).

[91] Bowman v. General Motors Corp., 427 F. Supp. 234 (E.D. Pa. 1977) (unreasonably dangerous requirement serves valuable function due to conscious tradeoff among safety, utility and cost); Green, *Strict Liability Under Section 402A and 402B; A Decade of Litigation*, 54 TEXAS L. REV. 1185, 1207-08 (1976) (not essential to show that product is defective, only that it is unreasonably dangerous) [hereinafter cited as Green].

[92] Schell v. AMF, Inc., 567 F.2d 1259 (3d Cir. 1977); Cepeda v. Cumberland Eng'r Co., Inc., 76 N.J. 152, 386 A.2d 816 (1978); Wilson v. Piper Aircraft Corp., 282 Or. 61, 577 P.2d 1322 (1978); General Motors Corp. v. Turner, 584 S.W.2d 844 (Tex. 1979).

[93] Walkowiak, *supra* note 38, at 736.

[94] 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978).

[95] 573 P.2d at 446.

[96] *Id.* at 455-56.

[97] *Id.*

[98] *Id.*

[99] *Id.*

herent in a negligence cause of action.[100] Shifting the burden of proof to the defendant is consistent with the fundamental public policy leading to strict liability.[101]

The UPLA incorporated a portion of the *Barker* court's analysis by requiring that the trier of fact weigh specific risk-utility factors in determining liability.[102] Unlike the *Barker* court, however, the UPLA places the burden of proof on the plaintiff.[103] The plaintiff must show that, in light of the risk-utility analysis, the product was unreasonably unsafe in its design.[104] By placing the entire burden of proof on the plaintiff, the UPLA seems to lose sight of the purpose of products liability in a highly complex, technological society. As noted by Justice Traynor in *Escola v. Coca-Cola Bottling Co.*,[105] the consumer who is injured by a defective product is unprepared to meet the consequences.[106] Unlike the manufacturer who is in a position to discover and evaluate the inherent dangers,[107] the consumer does not have the skill or the means to investigate the soundness of a product.[108]

Employing the analysis of the *Barker* court would require evaluating a design defect under the principles of strict liability rather than negligence. This approach provides fair treatment to both the consumer and the manufacturer. The plaintiff first would be required to show that his injury was proximately caused by the

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[100] *Id.* at 455.

[101] Other courts have recently adopted a strict liability standard for design defects. *See* Turner v. General Motors, 584 S.W.2d 844 (Tex. 1979). In *Turner* the Texas Supreme Court imposed a strict liability standard for design defects. The court stated that the jury should be instructed to follow a risk-utility analysis in determining if the design was defective; however, they are not to be given specific factors to consider in conducting the test. *Id.* at 847. *See* Suter v. San Angelo Foundry & Mach. Co., 81 N.J. 150, 406 A.2d 140 (1979). The New Jersey Supreme Court in *Suter* rejected the use of "unreasonably dangerous" as well as "defect" in the strict liability charge to the jury. The court noted that requiring proof that the design was "unreasonably dangerous" imposed an unnecessary burden on the injured plaintiff. *Id.* at 152.

[102] 44 Fed. Reg. 62,714, 62,723 (1979).

[103] *Id.*

[104] *Id.*

[105] 24 Cal. 2d 453, 461, 150 P.2d 436, 440-41 (1944) (Traynor J., concurring opinion).

[106] *Id.* at 461, 150 P.2d at 440-41.

[107] *Id.*

[108] *Id.* at 462, 150 P.2d at 441.

defective design of the product.[109] After causation is established, the manufacturer would be required to prove that the utility and benefits involved outweighed the risks imposed by the chosen design.[110] The negligence standard proposed by the UPLA would place the burden of proving that the risks outweighed the utility on the plaintiff, creating an insurmountable obstacle in many cases. The factors involved in making this analysis are clearly within the knowledge of the manufacturer, not the injured plaintiff.[111]

In outlining the risk-utility analysis, the UPLA sets forth a formula which requires the trier of fact to balance two pairs of factors.[112] The formula involves weighing "the likelihood that the product would cause the claimant's harm or similar harms, and the seriousness of those harms against the manufacturer's burden of designing a product that would have prevented those harms, and the adverse effect that the alternative design would have on the usefulness of the product."[113] Evaluating these two factors makes it clear that the manufacturer is not required to design a product that is the "ultimate in safety."[114]

In addition, the UPLA sets forth important evidence that the trier of fact should consider in balancing the factors.[115] First, proper and adequate warnings by the seller of the risks may prevent a product from being found defective in design.[116] Such warnings alone, however, will not relieve the seller of liability if the product could have been made more safe through the use of an alternative design.[117] Second, the manufacturer must present evidence which shows that it was not technologically and practically feasible to design a product which could have substantially served the user's

[109] Barker v. Lull Eng'r Co., Inc., 143 Cal. Rptr. 225, 573 P.2d 443, 455-56 (1978).

[110] *Id.*

[111] *See* Twerski, *supra* note 47, at 227-28. The authors state that liability based upon foreseeability of the risk always should be determined by strict liability, for there is no issue more difficult for the plaintiff to litigate than what the manufacturer's state of knowledge should have been for someone with expertise in his field.

[112] 44 Fed. Reg. 62,714, 62,723 (1979).

[113] *Id.*

[114] Kearns v. Engelke, 76 Ill. 2d 154, 390 N.E.2d 859, 865 (1979).

[115] 44 Fed. Reg. 62,714, 62,723 (1979).

[116] *Id.*

[117] *Id.*

needs and also could have prevented his injury.[118] It is unclear, however, when the burden of proof is shifted to the manufacturer. Imposing a negligence standard would require that the burden of proof initially be on the plaintiff to show that the manufacturer did not exercise the care of a reasonable man under the circumstance.[119] To do this, the plaintiff must show that an alternative design is more than just a technical possibility. If the alternative design destroys the usefulness of the product or if it significantly increases the product's cost, it would be an unacceptable alternative.[120]

The final two factors to be considered in applying the formula also deal with the practical feasibility of the alternative design. The third factor establishes the need to consider the alternative design's effect on the usefulness of the product.[121] A risk-utility analysis will be essential to achieve a proper balancing.[122] Thus, it will be important to examine the likelihood that the product as designed will result in an injury, the seriousness of the potential injury, the ability of the manufacturer to eliminate unsafe characteristics without impairing the usefulness of the product or significantly increasing its cost, and whether the product is more dangerous than would be contemplated by the ordinary consumer.[123] The fourth factor requires a consideration of the costs of production, distribution, selling and maintaining the product as it is designed.[124]

Finally, the UPLA rejects the use of the consumer expectation

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[118] *Id.* When the product liability area began to expand, it appeared to take little more than a suggestion from the plaintiff that an alternative design was available in order for a jury issue to arise. To recover, the plaintiff was required to only redesign the product so that it would prevent the particular injury that he suffered. Epstein, *supra* note 8, at 650.

[119] PROSSER, LAW OF TORTS, § 96 at 644 (1978).

[120] 44 Fed. Reg. 62,714, 62,723 (1979).

[121] *Id.*

[122] *Id.*

[123] Jeng v. Witters, 452 F. Supp. 1349 (M.D. Penn. 1978). *See also* Hagans v. Oliver Mach. Co., 576 F.2d 97, 100 (5th Cir. 1978); Dreisontok v. Volkswagenwerk, 489 F.2d 1066, 1071 (4th Cir. 1974); U.S. v. Carrol Towing Co., 159 F.2d 169, 173 (2d Cir. 1947); Phillips v. Kimwood Mach. Co., 269 Or. 485, 525 P.2d 1033, 1038 (1974).

[124] 44 Fed. Reg. 62,714, 62,723 (1979).

test[125] in determining whether the product's design is defective.[126] The test has been criticized for requiring too much subjectivity on the part of the trier of fact.[127] Applying the test requires a case-by-case analysis, taking into consideration the age, background, skill and experience of the plaintiff.[128] Although in many cases the test will produce a simple and sound result,[129] in others it will produce results inconsistent with a risk-utility analysis.[130] The test leaves little room for a finding of liability where the defect is open and obvious or where the person injured is a bystander.[131] In addition, there are two dangers inherent in the consumer expectation test. First, the consumer's expectations may reflect industry practices and thus may be very low if consumers become accustomed to dangerously designed products.[132] Second, in cases involving new and unfamiliar products, expectations of safety may tend to be unreasonably high, thus imposing a hardship on the manufacturer who fails to prevent a risk of which he is unaware.[133] The test is an imprecise method for imposing liability and is rightfully rejected by the drafters of the UPLA.

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[125] The basic thrust of the test is that liability should be imposed whenever a manufacturer leads customers to believe that a product will perform at a certain level and then the product fails to satisfy those expectations. Twerski, *supra* note 47, at 231.

[126] 44 Fed. Reg. 62,714, 62,723 (1979).

[127] *Id. See* Green, *supra* note 91, at 1205-06. Professor Green criticizes the test for imposing a fictitious standard on the jury. This test requires the jury to analyze liability using abstractions most commonly used in negligence cases. *See also* Donaher, Piehler, Twerski & Weinstein, *The Technological Expert in Products Liability Litigation*, 52 TEX. L. REV. 1303, 1307 (1974). The authors argue that the perspective of the reasonable consumer should be abandoned. The inquiry instead should be whether the public would demand a less dangerous product when given the risks and benefits of and possible alternatives to the product.

[128] Rheingold, *What Are the Consumer's "Reasonable Expectations"?*, 22 BUS. LAW. 589, 593 (1967).

[129] Montgomery, *supra* note 55, at 823.

[130] *Id.*

[131] *Id.*

[132] Vetri, *Products Liability: The Developing Framework for Analysis*, 54 ORE. L. REV. 293, 297 (1975).

[133] Fischer, *Products Liability—The Meaning of Defect*, 39 MO. L. REV. 339, 350 (1974).

C. *The Product Was Unreasonably Unsafe Because Adequate Warnings or Instructions Were Not Provided*

If the presence of a design defect is difficult for the plaintiff to establish because there exists no feasible design alternatives, the plaintiff may be able to argue that the manufacturer failed to provide adequate warnings or instructions.[134] Liability can be established for a failure to warn without encountering the difficulty and expense of obtaining expert testimony or of preserving evidence which may be needed to establish a design defect.[135] In addition, it is much easier for the jury to evaluate the adequacy of warnings and instructions than it is for them to evaluate the deficiencies of a complex design.[136]

The primary purpose of a duty to warn is to inform the consumer that a product is likely to be dangerous for its intended use, where there is reason to believe that the consumer will not appreciate the dangerous condition.[137] The duty normally arises in cases involving unreasonably dangerous products that contain either defects or dangers which cannot be eliminated. The UPLA imposes liability if the manufacturer fails to provide an adequate warning concerning the product's hazards or sufficient instructions about its use, regardless of whether the product is found to be unreasonably unsafe in its design or construction.[138]

The Act requires a showing of negligence before liability may be imposed for a failure to warn.[139] Therefore, as in cases involving design defects, the plaintiff will be required to prove that the manufacturer knew or should have known that harm would be likely to occur in the absence of a proper warning or instructions.[140] In the past, the duty to warn could arise under either negligence or strict liability principles.[141] The duty to warn under negligence

[134] *See* Twerski, *supra* note 47, at 234.

[135] Noel, *Products Defective Because of Inadequate Directions or Warnings*, 23 Sw. L.J. 256, 260 (1969) [hereinafter cited as Noel].

[136] *Id.* at 260-61.

[137] Note, 25 KAN. L. REV. 442, 444 (1977).

[138] 44 Fed. Reg. 62,714, 62,724 (1979).

[139] *Id.*

[140] *Id.*

[141] *But see* Green, *supra* note 91, at 1211. The suggestion that liability for a failure to warn should be based upon negligence overlooks the fact that 402A imposes a duty of strict liability so that the issue of care is irrelevant. *Id.*

principles is set forth in section 388 of the RESTATEMENT (SECOND) OF TORTS.[142] Various courts have followed section 388 by imposing a negligence standard in determining liability.[143] As many courts began adopting the principles of strict liability,[144] they began to distinguish between a negligent failure to warn and the duty to warn under a strict liability concept.[145]

The UPLA rejects the concept of strict liability for claims based upon a failure to warn.[146] Warnings, however, are of value only to those consumers who can be attentive to them. In certain situations, a warning will have no effect on some classes of foreseeable

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[142] 2 RESTATEMENT (SECOND) OF TORTS § 388 (1965):

> § 388. Chattel Known to be Dangerous for Intended Use
> One who supplies directly or through a third person a chattel for another to use is subject to liability to those whom the supplier should expect to use the chattel with the consent of the other or to be endangered by its probable use, for physical harm caused by the use of the chattel in the manner for which and by a person for whose use it is supplied, if the supplier
> (a) knows or has reason to know that the chattel is or is likely to be dangerous for the use for which it is supplied, and
> (b) has no reason to believe that those for whose use the chattel is supplied will realize its dangerous condition, and
> (c) fails to exercise reasonable care to inform them of its dangerous condition or of the facts which make it likely to be dangerous.

[143] Harrison v. Flota Mercante Grancolombiana, 577 F.2d 968 (5th Cir. 1978) (shipper negligently failed to warn of dangers inherent in inhalation of fumes); Suchomajcz v. Hummel Chemical Co., 524 F.2d 19 (3d Cir. 1975) (foreseeable that users of firework kits would be children); Olgers v. Sika Chem. Corp., 437 F.2d 90 (4th Cir. 1971) (foreseeable that combination of chemicals could cause anemia); Hontschel v. Baby Bathinette Corp., 215 F.2d 102 (2d Cir. 1954) (occurrence of household fire is not reasonably foreseeable); Hall v. E. I. DuPont De Nemours & Co., 345 F. Supp. 353 (E.D.N.Y. 1972) (foreseeable that children would acquire blasting caps); Stigler v. Bell, 276 So. 2d 799 (La. App. 1973) (sticking needle in spray can not reasonably foreseeable); Westerberg v. School Dist. No. 792, Todd County, 276 Minn. 1, 148 N.W.2d 312 (1967) (could not anticipate that purchaser would alter product's condition).

[144] 2 RESTATEMENT (SECOND) OF TORTS § 402A, Comment j (1965): "[T]o prevent the product from being unreasonably dangerous, the seller may be required to give directions or warnings, on the container, as to its use."

[145] Trujillo v. Uniroyal Corp., 608 F.2d 815 (10th Cir. 1979) (mounting of tire on wrong size rim); Westerman v. Sears, Roebuck & Co., 577 F.2d 873 (5th Cir. 1978) (blowout of steel belted radial tire); Reliance Ins. Co. v. Al E & C Ltd., 539 F.2d 1101 (7th Cir. 1976) (fifty-two ton end box fell during lifting operation); Patch v. Stanley Works, 448 F.2d 483 (2d Cir. 1971) (coating compound exploded when subjected to heat beyond fiash point); Davis v. Wyeth Laboratories, Inc., 399 F.2d 121 (9th Cir. 1968) (polio vaccine caused plaintiff to contract polio); Tuscon Indus., Inc. v. Schwartz, 108 Ariz. 464, 501 P.2d 936 (1972).

[146] 44 Fed. Reg. 62,714, 62,724 (1979).

consumers, such as children who are too young to appreciate the warning or bystanders who may not be aware of the warning.[147] In these situations, a warning would fail to reduce the risk level of the product. Therefore, strict liability would still serve a justifiable purpose for these classes of consumers.[148]

In determining whether liability should be imposed for a failure to warn, the UPLA sets forth two separate issues which should be examined.[149] First, was there a duty to warn or instruct the consumer about a particular matter? Second, was the warning or instruction that was given adequate?[150] In making these determinations the trier of fact may not use hindsight, but is required to put himself in the position of the manufacturer at the time the product was manufactured.[151] It is important that the trier of fact focus on the likelihood that the product would cause the claimant's harm, the seriousness of the injury, the adequacy of any warnings that were given, and the practical effects of providing the warnings or instructions which the plaintiff contends should have been provided.[152]

The UPLA lists several factors that should be considered in making these determinations.[153] First, in determining whether there was a duty to warn, the manufacturer must have the ability at the time the product is manufactured to know of the dangerous effects of the product and the nature of the harm that is likely to be incurred.[154] A plaintiff, however, by using the product in an unusual fashion, is capable of inventing a "duty to warn" situation which can far exceed the capacity of the manufacturer to provide adequate warnings.[155] The plaintiff's use of the product in such a

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[147] Donaher, Piehler, Twerski & Weinstein, *The Use and Abuse of Warnings in Products Liability—Design Defects Litigation Comes of Age*, 61 CORNELL L. REV. 495, 506 (1976) [hereinafter cited as Donaher]. Persons of limited reading ability could also be included in this group.

[148] *Id.* at 509.

[149] 44 Fed. Reg. 62,714, 62,724 (1979).

[150] *Id.*

[151] *Id.*

[152] *Id.*

[153] *Id.*

[154] *Id.*

[155] Epstein, *supra* note 8, at 654. The writer states that one example would be the consumer who poured cologne on a lighted Christmas tree candle to see

manner should be reasonably foreseeable in order for the manufacturer to be held liable.[156] Second, the manufacturer must have the ability to anticipate that the person who is likely to use the product would be unaware of its risk and of the nature of the harm that is likely to be incurred.[157] As the seriousness of the potential harm increases, the duty to warn becomes greater.[158] As indicated earlier,[159] the focus of the UPLA is entirely on the user of the product and not on the class of consumers who may be unaware of the warning.

The final two factors concern the technological and practical feasibility of providing effective warnings and the clarity and conspicuousness of the warnings.[160] The duty to provide a warning cannot go beyond the technological information available to the manufacturer at the time of manufacture.[161] In most cases practical feasibility is not a problem since warning defects, unlike design defects, are relatively simple and inexpensive to provide.[162] The fourth factor, the clarity and conspicuousness of the warning, is concerned with determining whether the warning that was given was adequate.[163] The Act does not provide a standard by which to measure adequacy. The standards of the industry and the standards of the manufacturer should be unacceptable. The trier of fact instead should ask whether the warning would alert an ordinary consumer to the danger involved.

For a warning to be considered "adequate", Professor Phillips has noted that it must be "conspicuous, strong, and clear."[164] The

whether it was scented. Moran v. Faberge, Inc., 273 Md. 538, 332 A.2d 11 (1975).

[156] *See* Spruill v. Boyle-Midway, Inc., 308 F.2d 79 (4th Cir. 1962) (foreseeable that child might drink furniture polish); Sun Valley Airlines, Inc. v. Avco-Lycoming Corp., 411 F. Supp. 598 (D. Idaho 1976) (unforeseeable that soda bottle would be used as hammer); Maddox Coffee Co. v. Collins, 46 Ga. App. 220, 167 S.E. 306 (1932) (foreseeable that coffee grounds would be eaten). *See also* Fischer, *supra* note 31, at 618.

[157] 44 Fed. Reg. 62,714, 62,724 (1979).

[158] *Id.*

[159] See notes 146-47 *supra* and accompanying text.

[160] 44 Fed. Reg. 62,714, 62,724 (1979).

[161] *Id.*

[162] *Id.*

[163] *Id.*

[164] Phillips, *supra* note 47, at 351.

Act adopts this definition.[165] Professor Phillips also states that a warning must describe the potential danger and the means of avoiding it.[166] In doing this, the manufacturer should be aware of contradictory statements and should avoid the use of technical terms.[167] There is also the danger that the warning may be too narrow in its scope.[168] In some instances, the intensity of the warning may be undermined by representations of safety which can be conveyed by the title of the product[169] or through advertisements.

The UPLA provides that little or no warning will be necessary for a person accustomed to using the product, but a clear and strong warning will be required when the manufacturer can reasonably expect the product to be used by a person who is unfamiliar with it.[170] It may be difficult to draw a clear line between the inexperienced and the expert user. It is also possible that a product which is used for the most part by experts or other persons who realize the risk involved will occasionally be used by an inexperienced consumer.[171] By imposing a duty to warn of the dangers on all products, the do-it-yourself user would be protected.[172]

Under the UPLA a causation link also must be established between the lack of or inadequacy of the warning or instructions and the plaintiff's injuries.[173] The plaintiff must show that the injury would not have occurred had adequate warnings or instructions been given since a reasonably prudent person either would have declined to use the product or would have used it in a manner that would have avoided the harm.[174] Professor Twerski has convincingly argued, however, that this causation requirement serves no purpose when the injury results from a nonreducible risk,

[165] 44 Fed. Reg. 62,714, 62,724 (1979).

[166] Phillips, *supra* note 47, at 351.

[167] McClanahan v. California Spray-Chem. Corp., 194 Va. 842, 75 S.E.2d 712 (1953).

[168] Jackson v. Coast Paint & Lacquer Co., 499 F.2d 809 (9th Cir. 1974) (warning encompassed danger of inhaling toxic fumes, not danger of explosion).

[169] Maize v. Atlantic Ref. Co., 352 Pa. 51, 41 A.2d 850 (1945) (Safety-Kleen).

[170] 44 Fed. Reg. 62,714, 62,724 (1979).

[171] Noel, *supra* note 135, at 273.

[172] *Id.*

[173] 44 Fed. Reg. 62,714, 62,724 (1979).

[174] *Id.*

such as that associated with drugs and industrial chemicals.[175] The purpose of the warning in these cases is to ensure that the consumer's decision to use the product is based upon an intelligent choice.[176] To impose a duty to warn only where a reasonable person would choose not to use the product destroys the assurance that the user is acting with informed consent.[177]

The UPLA does not require the manufacturer to warn about dangers which are obvious.[178] Several writers have stated that unnecessary warnings can reduce the effectiveness of all warnings.[179] The danger exists that consumers will become jaded to warnings in general.[180] The obviousness of the danger should not serve as an excuse, however, if there is the possibility that the extent of the danger will not be fully appreciated.[181] In these instances, providing an adequate warning would be a simple matter.[182] It is also made clear under the Act that the obviousness of the danger will not prevent liability if the danger is due to an unreasonably unsafe design.[183] Thus, only a product that is deemed to be "unavoidably unsafe"[184] and whose danger is obvious will escape the requirement that a warning be given.

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[175] Twerski, *supra* note 47, at 236.

[176] *Id.*

[177] *Id.*

[178] 44 Fed. Reg. 62,714, 62,725 (1979). *See also* Simpson v. Hurst Performance Inc., 437 F. Supp. 445 (M.D.N.C. 1977) (no duty to warn of dangers arising from hitting stick shift of automobile during accident); Berry v. Eckhardt Porsche Audi, Inc., 578 P.2d 1195 (Okla. 1978) (no duty to warn of consequences of nonuse of seatbelts); Skyhook Corp. v. Jasper, 90 N.M. 143, 560 P.2d 934 (N.M. 1977) (no duty to warn of obvious danger of being electrocuted if life cable touched high voltage lines); Menard v. Newhall, 135 Vt. 53, 373 A.2d 505 (Vt. 1977) (no duty to warn of potential eye injury caused by discharging BB gun).

[179] Donaher, *supra* note 147, at 514.

[180] *Id.* at 513-14.

[181] Marschell, *An Obvious Wrong Does Not Make a Right: Manufacturer's Liability for Patently Dangerous Products*, 48 N.Y.U. L. REV. 1065, 1079 (1973) [hereinafter cited as Marschell]. *See also* Trujillo v. Uniroyal Corp., 608 F.2d 815 (10th Cir. 1979) (risk of explosion due to mounting automobile tire on wrong size rim); Outboard Marine Corp. v. Stauffer Chemical Corp., 93 Nev. 158, 561 P.2d 450 (Nov. 1977) (risk of explosion due to spark emitted from electric utility cart used in chemical plant).

[182] Marschell, *supra* note 181, at 1079.

[183] 44 Fed. Reg. 62,714, 62,725 (1979).

[184] "There are some products which, in the present state of human knowledge, are quite incapable of being made safe for their intended and ordinary use.

The UPLA also acknowledges the existence of a "post-manufacture" duty to warn.[185] It has long been recognized that a seller has a continuing duty to provide needed warnings after the sale.[186] Some courts have been especially willing to impose liability for failure to fulfill this duty where the magnitude of the potential danger was great[187] or where the burden of providing a warning was small.[188] It is not entirely clear what actions the UPLA would require the manufacturer to take. The UPLA merely provides that he must act as a reasonably prudent manufacturer in discovering any serious risks connected with the product after it is manufactured, and that he must take reasonable steps to warn the purchaser if any risks are discovered.[189]

The meaning of "reasonableness" is the key issue. It is unclear whether the UPLA would require that a warning be given when the cost of providing an effective warning is high and the risk of potential harm is minimal. In such cases, a general warning through advertising would probably be sufficient.[190] This also would be true if the number of purchasers were large and the manufacturer has no way of contacting each one individually. When the danger involved is substantial, the manufacturer must make a greater effort to contact the individual.[191] If at all possible, the manufacturer must contact the individual personally. In some instances, he may be required to make steps such as offering to correct the problem without charge.[192]

These are especially common in the field of drugs." RESTATEMENT (SECOND) OF TORTS § 402A, Comment k (1965).

[185] 44 Fed. Reg. 62,714, 62,725 (1979).

[186] Braniff Airways, Inc. v. Curtiss-Wright Corp., 411 F.2d 451, 453 (2d. Cir.), *cert. denied*, 396 U.S. 959 (1969), *cert. denied*, 400 U.S. 829 (1970); Noel v. United Aircraft Corp., 342 F.2d 232, 241-42 (3rd Cir. 1964).

[187] Davis v. Wyeth Laboratories, Inc., 399 F.2d 121, 129 (9th Cir. 1968) (action by plaintiff against manufacturer of polio vaccine seeking damages resulting from plaintiff's contraction of polio after taking vaccine).

[188] Basko v. Sterling Drug, Inc., 416 F.2d 417 (2d Cir. 1969) (list of doctors easily available for mailing warning); Braniff Airways, Inc. v. Curtiss-Wright Corp., 411 F.2d 451 (2d Cir. 1969) (small number of users of airplane engines).

[189] 44 Fed. Reg. 62,714, 62,725 (1979).

[190] *Id.*

[191] Phillips, *supra* note 48, at 333.

[192] *Id.*

D. *The Product Was Unreasonably Unsafe Because It Did Not Conform to an Express Warranty*

A breach of the seller's express warranty is the final basis that may be used to establish the manufacturer's liability for producing a defective product. A breach of warranty action is not based upon negligence or upon the failure to exercise reasonable care.[193] Liability arises when the product fails to measure up to the express or implied representations of the manufacturer.[194] The UPLA does not require the injured plaintiff to establish negligence on the part of the manufacturer; strict liability is imposed in all products liability warranty cases.[195] Therefore, as in cases involving manufacturing defects, the attention of the trier of fact should be focused on the condition of the product rather than on the conduct of the manufacturer.[196] This is in accordance with prior case law[197] and with the RESTATEMENT (SECOND) OF TORTS.[198]

The UPLA defines an express warranty as any "positive statement, affirmation of fact, promise, description, sample, or model relating to the product."[199] The statement must refer to a material fact about the product; "puffing" or mere sales talk is not actionable.[200] In recent years, however, courts have moved towards narrowing the scope of "puffing" and have chosen to expand the liability of manufacturers for broad statements concerning the quality of their products.[201] By imposing absolute liability, the burden of proof will be on the manufacturer to show that the language used does not constitute an express warranty.

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[193] FRUMER & FRIEDMAN, *supra* note 15, at 3A-3.

[194] *Id.*

[195] 44 Fed. Reg. 62,714, 62,720 (1979).

[196] *Id.*

[197] Sheeskin v. Giant Food, Inc., 20 Md. App. 611, 318 A.2d 874, 885 (1974) (no need to show negligence in warranty case); Awedian v. Theodore Efron Mfg. Co., 66 Mich. App. 353, 239 N.W.2d 611 (1976) (plaintiff not required to show negligence but must show existence of defect and causal relationship to injury); Tully v. Empire Equip. Corp., 28 A.2d 935, 282 N.Y.S.2d 322 (1967) (instruction given in terms of negligence and reasonable care was erroneous).

[198] 2 RESTATEMENT (SECOND) OF TORTS § 402B (1965).

[199] 44 Fed. Reg. 62,714, 62,720 (1979).

[200] *Id.* at 62,726.

[201] Hauler v. Zogarts, 14 Cal. 3d 104, 112, 534 P.2d 377, 381, 120 Cal. Rptr. 681, 685 (1977).

To recover for a breach of warranty claim under the UPLA, a plaintiff will be required to establish the following factors: first, that he did in fact rely on the express warranty; second, that a causation link exists between the harm incurred and the manufacturer's representations; and third, that the warranty was directed toward the plaintiff.[202] The Act also imputes reliance to a plaintiff if a person acts on his behalf, such as a husband or wife.[203] It is unclear whether the concept of "imputed reliance" is limited to those who are members of the purchaser's immediate family, or whether it can be extended to friends, guests, or even bystanders. Several cases have held that the manufacturer's express warranty should be extended to the benefit of a non-purchasing user.[204] The requirement of reliance can produce harsh results in some instances. If the injured party is a non-purchasing user or bystander who fails to receive the benefit of the manufacturer's warning, and who is unable to establish the existence of a construction or design defect, a further penalty would result since the injured party would not be allowed to benefit from the purchaser's reliance on the express warranty. If the purchaser had not been induced to buy the product, the user or bystander would not have incurred his injury.[205]

III. CONCLUSION

Some type of a uniform product liability law needs to be adopted. Although product liability is a relatively new area of the law, it is an area which has spawned much litigation. Various courts and noted authorities continue to disagree over the standards to be imposed on a manufacturer who places a defective product into the stream of commerce. By imposing two separate standards, the UPLA appears to have achieved a compromise.

One standard alone would be ineffective; products liability re-

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[202] 44 Fed. Reg. 62,714, 62,725 (1979).

[203] *Id.*

[204] Mannsz v. Macwhyte Co., 155 F.2d 445 (3rd Cir. 1946) (co-worker entitled to benefit from express warranty); Thompson v. Reedman, 199 F. Supp. 120 (E.D. Pa. 1961) (fact of reliance irrelevant in cause of action by passenger in auto for breach of express warranty); Peterson v. Lamb Rubber Co., 54 Cal. 2d 339, 353 P.2d 575, 5 Cal. Rptr. 863 (1960) (employee considered part of "individual family" of employer).

[205] FRIEDMAN & FRUMER, *supra* note 15, at 3A-268.

quires the application of strict liability for some defects and the application of negligence for others. Few would disagree that strict liability should be imposed for defects in construction. The manufacturer has total control over the production process, and there is little that a consumer can do to protect himself from such defects. Conversely, there is considerable disagreement over the standard that should be imposed for design defects. The *Barker* court's analysis[206] offers the most effective approach. Unlike the approach of the UPLA, the analysis in *Barker* would impose strict liability for design defects. It would not impose liability in the strict sense that it is imposed for construction defects. There is no place for a risk-utility analysis in evaluating construction defects—absolute liability is required. In evaluating design defects, however, the manufacturer may avoid liability if he is able to show that the balance of the risk-utility factors falls in his favor.

Fault can be found in uniformly imposing a negligence standard for a failure to warn of possible defects. In the majority of situations the UPLA's negligence standard would be the correct approach, but it is inappropriate in cases where the injury is incurred by a child, a bystander, or by a person of limited reading ability. A proper warning will not serve to reduce the risk which confronts these groups of consumers. These limited circumstances suggest that a need for absolute liability exists.

The strict liability standard imposed for a defect arising from a breach of an express warranty is consistent with prior case law. Since the manufacturer is specifically inducing the consumer to purchase his product, strict liability can be readily justified. The plaintiff must show only reliance and causation in order to recover for his injury.

When product liability first became recognized as an area of tort law, courts displayed considerable confusion concerning the standards that should be applied to manufacturers' conduct. This confusion has led to inconsistent results. The adoption of a uniform products liability law would be a significant advancement in this area. The UPLA should be applauded as it takes a major step in this direction. With a few adjustments, it may be the answer for a complex and confusing area of the law.

[206] See notes 96-102 *supra* and accompanying text.