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Indiana Law Journal

Volume 42 | Issue 3 Article 1

Spring 1967

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Dickerson, Reed (1967) "Products Liability: How Good Does a Product Have To Be?," Indiana Law Journal: Vol. 42: Iss. 3, Article 1. Available at: http://www.repository.law.indiana.edu/ilj/vol42/iss3/1

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INDIANA LAW JOURNAL

Volume 42 SPRING 1967 Number 3

PRODUCTS LIABILITY: HOW GOOD DOES A PRODUCT HAVE TO BE?

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INTRODUCTION

As the privity doctrine fades into history, there is little reason for sorrow. Besides its more obvious shortcomings, the doctrine's almost hypnotic attractions have long diverted attention from more important aspects of products liability. One of these is the concept of "legal defect," which is summed up in the question: How good does a product have to be to satisfy the legal responsibilities of its maker and its distributors?

The concept of legal defect has matured slowly, partly because of its subtlety and partly because, with the generally more attractive financial position of manufacturers, a largely untriable issue of negligence has been forced on the courts by the privity hazards in warranty. Because under the negligence approach it is necessary, after proof of causation, only to stigmatize the defendant, the plaintiff has not often needed to make an independent effort to stigmatize the product. As a result, product inadequacy has seemed to deserve, and (until recently) has re-

Dickerson, The Basis of Strict Products Liability, 17 Bus. Law. 157, 166 (1961), also published in 16 Food Drug Cosm. L.J. 585, 595 (1961), and 468 Ins. L.J. 7, 15 (1962).

[†] Professor of Law, Indiana University; author, Products Liability and the Food Consumer (1951).

^{1.} Particularly in cases involving slips in manufacture as distinct from cases involving defective design.

What we have been calling liability based on fault in the products cases has been for the most part strict liability. The reported cases indicate that the courts have rarely been able to try a bona fide negligence issue in the field of products liability, particularly in the case of food, because the specific facts surrounding the defect are rarely known to either party. In practice, if the plaintiff can persuade the jury that the defect was in the product when it left the defendant's plant, the inferences are usually drawn in his favor on the theoretical issue of negligence, with or without an assist from the doctrine of res ipsa loquitur or that of negligence per se. Because this is only paying lip service to culpability, the privity requirement has probably served only to drive strict liability into the legal underground.

ceived, secondary attention.2

Where, on the other hand, the producer can be directly reached in implied warranty or on some other theory of strict accountability, the legal framework is different. The courts have not imposed liability solely on the basis of causation, as some analyses of warranty might seem to imply; otherwise, the makers of axes would be liable to every user who accidentally cut himself.8 Instead, they have imposed liability only if, besides causing the plaintiff's injury, the defendant's product could be considered "legally defective" at the time he sold it.4 And so, although he need not impugn the defendant, the plaintiff must impugn the product.⁵ It must have failed, at the time of sale, to measure up to an appropriate standard of performance. The question is: What standard? With the increasing feasibility and success of warranty or other strict liability suits against the manufacturer, this question has become one of the most important in products liability. Only by developing a coherent legal doctrine of product inadequacy can we effectively implement our answers to the underlying social question: Who should bear

^{2.} Discussion has been confined for the most part to the last six years. Recent discussions include Dickerson, supra note 1, at 162-66, 592-96, and 12-15, respectively; Freedman, "Defect" in the Product—The Necessary Basis for Product Liability in Tort and in Warranty, 33 Tenn. L. Rev. 323 (1966); James, The Untoward Effects of Cigarettes and Drugs: Some Reflections on Enterprise Liability, 54 Calif. L. Rev. 1550 (1966); Keeton, Products Liability—Liability Without Fault and the Requirement of a Defect, 41 Texas L. Rev. 855 (1963); Keeton, Products Liability—The Nature and Extent of Strict Liability, 1964 U. ILL. L.F. 693, 701; Traynor, The Ways and Meanings of Defective Products and Strict Liability, 32 TENN. L. Rev. 363 (1965); Wade, Strict Tort Liability of Manufacturers, 19 Sw. L.J. 5, 13 (1965). See also RESTATEMENT (SECOND), Torts § 402A, comments g-k (1965); Boshkoff, Some Thoughts About Physical Harm, Disclaimers and Warranties, 4 Bost. Coll. Ind. & Com. L. Rev. 285 (1963). For an earlier discussion, see Dickerson, Products Liability and the Food Consumer ch. IV (1951).

^{3. &}quot;An axe is not necessarily dangerous because, as in negligence law, users would contemplate the obvious dangers involved." Greeno v. Clark Equip. Co., 237 F. Supp. 427, 429 (N.D. Ind. 1965).

^{4.} E.g., Piercefield v. Remington Arms Co., 375 Mich. 85, 96, 133 N.W.2d 129, 134 (1965) ("he must allege and prove (a) the defect of manufacture upon which he relies, and (b) injury or damage caused by or resulting from such defect"); Jakubowski v. Minnesota Mining & Mfg., 42 N.J. 177, 199, A.2d 826 (1964). See also Dickerson, supra note 1, at 163, 592, and 12, respectively; Dickerson, Recent Developments in Food Products Liability, 8 Prac. Law. 17, 26 (1962), also published in 20 J. Mo. Bar 74, 80 (1964); Keeton, Products Liability—Liability Without Fault and the Requirement of a Defect, 41 TEXAS L. REV. 855, 858 (1963).

^{5.} In a sense, even impugning the product impugns the defendant's conduct. It is . . . a gross exaggeration to put at opposite poles what represent only modest differences in degree. On the one hand, even liability for negligence is a kind of strict liability so far as it holds a person to a general standard of conduct without regard to his particular idiosyncracies. On the other hand, strict liability, despite its name, also deals with the defendant's conduct and differs only in that it substitutes what has been called in other contexts a "performance standard" for a standard that deals with specific conduct. Dickerson, *supra* note 1, at 165, 595, and 14, respectively.

the risk of loss when a commercial product injures its user?

The problem of legal defect has remained partly obscured even in warranty cases, because in many kinds of situations the existence of a legal defect may be taken for granted. If the plaintiff has been injured by a mouse in a soft drink bottle, a stone in a can of beans, or a needle in a box of crackers, there is little reason to linger over the question of legal defect. Even with the controversial chicken bone in chicken pie, where we have something "natural" (as distinct from "foreign") to the product, courts that have imposed liability have at least had an unwelcome abnormality to point to. For the most part such cases involve an occasional slip in manufacture or preparation, where the key to legal defectiveness is an unexpected and often isolated fall-off in quality.6

In many other situations, the marks of legal defectiveness are harder to see.7 This is particularly true of products with allegedly faulty design, where the offending condition is normal to the product or brand. Before their engine mounts were redesigned, Lockheed's Electras provided a dramatic example.8

Until recently, the law has recognized legal defectiveness only by negative implication from what it has affirmatively demanded. Thus, in the law of implied warranty of quality, a product has been required to be "merchantable," fit for any particular purpose that the seller has reason to know the buyer is relying on him to satisfy, and consistent with any relied-on representation or promise as to quality. Legal defectiveness has consisted simply of non-compliance with any of these requirements.

The implied warranty of fitness, which the Uniform Commercial Code⁹ has restored to its originally intended function as a protection custom-tailored to special consumer needs, 10 sets a variable standard of

^{6.} On the "natural-foreign" test for legal defectiveness, see, for example, Webster v. Blue Ship Tea Room, Inc., 347 Mass. 421, 426, 198 N.E.2d 309, 312 (1964) ("the occasional presence [of fish bones] . . . in chowders is, it seems to us, to be anticipated"); Allen v. Grafton, 170 Ohio St. 249, 259, 164 N.E.2d 167, 174 (1960). Cf. Betehia v. Cape Cod Corp., 10 Wis. 2d 323, 103 N.W.2d 64 (1960). DICKERSON, PRODUCTS LIABILITY AND THE FOOD CONSUMER 184 (1951). And see Dickerson, Recent Dévelopments in Food Products Liability, supra note 4, at 27-28 and 81, respectively.

^{7.} On the other hand, proof of legal defectiveness does not necessarily involve pinpointing a specific defect. A simple failure of the product to meet its relevant standards of performance is enough, if the unspecified offending condition is traceable to the deendant's plant. Tremeroli v. Austin Trailer Equip. Co., 102 Cal. App. 2d 464, 227 P.2d 923 (1951) (failure of fifth-wheel mechanism for hitching tractor to semi-trailer); Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 409-10, 161 A.2d 69, 97-99 (1960) (defective steering mechanism); Amram & Goodman, Some Problems in the Law of Implied Warranty, 3 Syracuse L. Rev. 259, 272 (1952).

^{8.} See Serling, The Electra Story (1963).

<sup>9. § 2-315.
10.</sup> Under § 15(2) of the Uniform Sales Act, the general warranty of merchantability was limited to sales "by description." Courts reluctant to ignore this limitation

quality with respect to which non-compliance defines a corresponding, variable measure of legal defectiveness. Similarly for the custom-tailored protections of express warranty. Beyond this, there is little opportunity to generalize.

The main concern of this article is the failure of a product to meet the standardized requirements of quality that the law imposes on behalf of the consumer in instances where he and the other parties concerned have not adopted a special standard of performance. In the field of warranty, this means the breach of the warranty of merchantability.

In the conventional language of implied warranty, the initial question has always been: When is a product "not of merchantable quality" for consumer use? The Uniform Sales Act, unfortunately, did not define "of merchantable quality," and the Uniform Commercial Code tells us only that to be qualitatively "merchantable" the goods must be "fit for the ordinary purposes for which such goods are used." The key word is "ordinary."

Carefully avoiding the language of warranty, Section 402A of the Restatement of Torts, Second, approaches the problem by setting, instead of a standard of compliance, a standard of non-compliance and thus an express, direct standard of legal defectiveness. But for this purpose it prescribes liability for nothing more specific than "a defective condition unreasonably dangerous to the consumer." The key words are "unreasonably dangerous."

Despite these differing approaches, the underlying problem appears to be the same. Apparently, it makes no material difference whether a court operates under the common law, the Uniform Sales Act, or the Uniform Commercial Code, and whether it takes the traditional warranty approach or the *Restatement* approach. Thus, a coherent, uniform idea of "legal defectiveness" that fits comfortably with each of these approaches, as well as with the principles of negligence, ¹³ can be developed.

have provided comparable protection in sales other than by description by reading "particular purpose," in § 15(1), as including the ordinary, general purposes of the product,

^{11. &}quot;(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. . . ." And see accompanying comments h-k.

^{12.} Wade, supra note 2, at 15 n.4, prefers the words "not reasonably safe." According to Wights v. Staff Jennings, Inc., 241 Ore. 301, 311, 405 P.2d 624, 629 (1965), the product must be in an "extrahazardous condition."

Is the term "defective condition unreasonably dangerous" redundant? Although a product can be defective without being unreasonably dangerous (e.g., sand in a restaurant salad), can a product be unreasonably dangerous without being legally defective? Although a good case can be made for saying that it cannot, apparently it was feared that without the word "defective" some courts might consider a highly dangerous product (e.g., rotary lawn mower) to be ipso facto unreasonably dangerous.

^{13.} Noel, Recent Trends in Manufacturers' Negligence as to Design, Instructions or Warnings, 19 Sw. L.J. 43, 44-46 (1965).

Consideration of the reported cases strongly suggests that the factors defining compliance with minimum standards of consumer use (and, conversely, the non-compliance inherent in the idea of legal defect) are closely identified with the normal, reasonable expectation patterns of buyers and sellers.¹⁴ This is not surprising, because the protection of, or reluctance to disturb, established patterns of expectation motivates much of the law. (It explains, for instance, why the courts are reluctant to apply some statutes retroactively.)

Consideration of the cases also suggests that legally defective products can frustrate reasonable expectations in several ways. Some products disappoint reasonable expectations simply by failing to do what they are supposed to do (e.g., an automobile steering system that fails to steer properly). Some products whose functions are aimed at particular evils disappoint reasonable expectations by causing the very evils they are designed to prevent (e.g., polio vaccine that causes polio). Others, while performing their intended functions, disappoint by producing unexpected side effects (e.g., thalidomide that, while tranquilizing, deforms the fetus carried by a pregnant user). Still others disappoint by failing to cope with foreseeable mishaps, either by lacking feasible safety devices (e.g., a gun that has no catch) or by not minimizing partially avoidable consequences (e.g., a car that lacks a collapsible steering column, shoulder harnesses, or adequate interior padding).

Turning now to the specifics of product disappointment, perhaps we can illumine general doctrine by looking at typical examples from the rich and rapidly developing body of case law.

THE REASONABLE EXPECTATIONS OF THE CONSUMER

In General

The trichinosis cases clearly show the relevance of reasonable consumer expectations in determining whether a product is legally defective. Here the offending entity—trichinella spiralis—is, at least after the fact, easy to identify. Because the presence of a dangerous parasite might appear to many courts to be an obvious legal defect, the practical problem

^{14.} This refers, for the most part, to decisions relating to warranty or other strict products liability actions. In this area, negligence cases must be approached with caution, not because most of them center on the defendant's conduct rather than on the adequacy of the product, but because the general standards for impugning the defendant tend to be stricter than those for impugning the product. Thus, although a case that holds the defendant liable for negligence implies that the product was legally defective, a case that absolves the defendant of negligence does not necessarily absolve the product. Some negligence opinions deal expressly with the adequacy of the product.

^{15.} Some side effects, whether expected or unexpected, are justified as being preferable to the severe consequences of non-use. See notes 83-85 infra.

^{16.} DICKERSON, PRODUCTS LIABILITY AND THE FOOD CONSUMER 190-211 (1951).

has been: What legal rule should the court invoke when it wishes to avoid finding the defendant liable where it can be assumed that (1) it was impracticable for the defendant processor to cook the pork to the thermal death-point of trichinae, and (2) the consumer normally anticipates the danger and cooks the product sufficiently to meet the risk?

In a negligence case, the court may deny recovery on at least two grounds. It may say that the defendant was not negligent. Or it may say that the plaintiff was contributorily negligent in failing to meet accepted standards of cookery, an approach that seems unnecessarily indirect.¹⁷ In warranty or in other strict liability actions, the corresponding approach is to say that because of the way the functions of processing pork are normally distributed, the product is not legally defective merely because at the moment of sale it happens to contain an undesirable parasite. In general, edibility at the moment of sale is not the appropriate test of wholesomeness. The more reliable test is whether the product is in such a condition at that time that it will be edible after the normal steps of unpackaging, cleaning, and cooking or other processing have been taken.

To say that trichinous pork is not legally defective is to assume that under customary and anticipated methods of cooking pork the temperature reaches the thermal death-point of 131 degrees. If the assumption is false, trichinous pork is properly considered legally defective if unaccompanied by a warning or appropriate cooking instructions. (When appraising the legal acceptability of a product, we should take account of the warnings or instructions, if any, that accompany it.)

From these considerations can we derive any test of legal defectiveness? At least, we can be sure that to constitute a legal defect the offending condition must be one that the typical consumer of the product does not anticipate and guard against.¹⁹ The product must betray his reasonable, established expectations.

The reasonable expectations of consumers provide a helpful guide, but a slippery one. If defectiveness depends on the reasonable expecta-

^{17.} There is no point in talking about an affirmative defense when the facts that support the defense negate the cause of action itself.

^{18.} DICKERSON, op. cit. supra note 16, at 210; RESTATEMENT (SECOND), TORTS \S 402A, comment h (1965).

^{19.} Consumer knowledge of the risk is a necessary element also in the defense of assumption of risk. The two concepts are compared in Keeton, Assumption of Product Risks, 19 Sw. L.J. 61, 73-75 (1965). See also Keeton, Assumption of Risk in Products Liability Cases, 22 La. L. Rev. 122 (1961); Chapman v. Brown, 198 F. Supp. 78, 85-86 (D. Hawaii 1961), aff'd, 304 F.2d 149 (9th Cir. 1962). The Uniform Commercial Code recognizes assumption of risk but does not apply it under that name. Reasonably discoverable shortcomings are simply not covered by implied warranty. See § 2-316(3) (b) and comment 8. Cf. Uniform Sales Act § 15(3).

tions of particular classes of consumers, how can we measure those expectations? How, for instance, can we measure the expectations of the normal housewife as to whether and how fully particular pork products need to be cooked? Consumer expectations are as subtle as perceived meanings; both depend on the particular environments in which they operate. Fortunately, problems of this kind are common grist for the courts, and a judgment as to the reasonable expectations for a particular product is no harder to make than the lexicographical judgment as to what a particular phrase normally means in a particular speech community. It is a familiar exercise in judicial empathy.

The most troublesome situations are those in which consumer attitudes have not sufficiently crystallized to define an expected standard of performance. What, for instance, should the law do about tractors that overturn, surgical implants that break, and rear-engined automobiles that tend to swerve at high speeds? These are products that tend to involve allegedly faulty design.20 If it is not feasible to improve the product's performance or to provide a safety device for situations in which the consumer appears to be undesirably vulnerable,21 the answer may lie in requiring appropriate warnings or instructions for use.22

Although there is a tendency in such cases to refer to a "duty to warn" or "duty to provide a safety device" as if they were independent duties, it seems preferable to approach these "duties" as alternative means of discharging a single, broader duty to provide, under prescribed conditions, a product that does not violate the consumer's normal expectations by exposing him to an unreasonable and concealed danger. The "duty to

^{20.} On design defects generally, and subject to the warning in note 14 subra. see Annot., 76 A.L.R.2d 91 (1961); Noel, Manufacturer's Negligence of Design or Directions for Use of a Product, 71 YALE L.J. 816 (1962); Noel, supra note 13; Noel, Manufacturer's Liability for Negligence, 33 Tenn. L. Rev. 433, 453-58 (1966).

^{21.} Subject to the warning in note 14 supra, see Noel, Manufacturer's Liability for Negligence, supra note 20, at 454-57. The law on safety devices has hardly begun to jell. Although the rationale of this article would tend to support the general view that a safety device (like a warning) is required only with respect to latent conditions, several cases have suggested that an unreasonably dangerous condition may exist even with respect to defects that are not latent. See Iacurci v. Lummus Co., 340 F.2d 868, 872 (2d Cir. 1965); Wright v. Massey-Harris, Inc., 68 Ill. App. 2d 70, 73-75, 215 N.E.2d

^{(1925) (}Hactor). C. Pold Motol Co. V. Wolhel, 32 F.2d 16, 20 (7th Ch. 1929) (tractor). On warnings and directions for use generally, see Annot. 76 A.L.R.2d 9 (1961); Frumer & Friedman, Products Liability § 8 (1965); Restatement (Second), Torts, § 402A, comment j (1965); Dillard & Hart, Products Liability: Directions for Use and the Duty to Warn, 41 Va. L. Rev. 145 (1955); Noel, Manufacturer's Negligence of Design or Directions for Use of a Product, 71 YALE L.J. 816 (1962); Noel, Recent Trends in Manufacturer's Negligence as to Design, Instructions, or Warnings, 19 Sw. L.J. 43 (1965).

warn" is thus a duty only in the sense that in particular circumstances a warning may be the most feasible alternative.

Contemplated Use

Consumer expectations normally relate to contemplated, generally accepted uses. With food, the problem of contemplated use is slight, because food is to eat, and once we have said that there is little more to tell. The same is true of other single-use products, such as electric toothbrushes. Even so, it is sometimes hard to tell whether the particular use to which the injured plaintiff was putting the product was a contemplated one and thus one with respect to which his expectations may be said to be "reasonable."

In a case recently litigated in Indiana, the plaintiff used a cheap hammer to drive a case-hardened nail into a concrete wall. The face of the hammer chipped and the fragment destroyed the sight of one of his eyes. Was this a contemplated use, such that it could be said that the hammer was legally defective because it failed to meet the reasonable expectations of the user with respect to that use? This problem is often stated in terms of "misuse," a term that tends to confuse the problem of non-contemplated use with that of contributory negligence, which it overlaps.²³

The difference between non-contemplated use and contributory negligence is easily illustrated. Suppose that, having no other implement, a camper gently uses a screw driver to pry the lid from a tin of tobacco. The screw driver snaps and a piece pierces his eye. The plaintiff camper has not been negligent or assumed the risk, because he has often used a screw driver for simple prying purposes and he has been careful on this occasion. Even so, he will be defeated by his own conduct if this kind of use was significantly abnormal. Product adequacy does not mean adequacy for every purpose.

In trying to refute the charge of defectiveness, the defendant would undoubtedly argue that the purpose of a screw driver is to insert or withdraw screws, and that, if a product that is designed for one purpose is

^{23.} The court in Maiorino v. Weco Products Co., 45 N.J. 570, 214 A.2d 18 (1965), apparently felt that abnormal, careless use should be treated as contributory negligence, even in a warranty suit. Cf. Vincent v. Nicholas E. Tsiknas Co., 337 Mass. 726, 729, 151 N.E.2d 263, 265 (1958) ("glass jars are not sold, or bought, in the expectation that they will be subjected to pressures which may be developed by using as a lever, in the manner described, a tool designed to make holes in metal cans"). See also Strahlendorf v. Walgreen Co., 16 Wis. 2d 421, 435, 114 N.W.2d 823, 830 (1962). A doctrine of noncontemplated use is necessary, in warranty cases, to bar the non-careless plaintiff. Swain v. Boeing Airplane Co., 337 F.2d 940, 942 (2d Cir. 1964). Because the same doctrine also takes care of the careless plaintiff, the doctrine of contributory negligence would seem to be unnecessary in warranty or other strict liability cases.

used for another, his responsibility ends. But to say that a screw driver may be used only to drive screws is to be bewitched by names. Should not the seller be held accountable for the secondary uses to which his product is likely to be put by the resourceful, yet reasonable, user? A chair, for example, should be safe for standing on as well as sitting in.²⁴ And, if common practice is a reliable guide, a screw driver should be safe for simple prying purposes.²⁵

The defendant might seek comfort in Mannsz v. MacWhyte,²⁶ in which the decedent had lost his life when a wire rope made by the defendant and marketed as a special-purpose rope broke while being used to support a scaffold. Although the use was different from the advertised one, the weight that it failed to sustain was well below the maximum sustaining weight that the defendant expressly undertook to provide.

In such a case it would be easy to say that the contemplated use was simply that stated by the manufacturer:

[Our rope] is used as a hand rope in connection with the operating device of . . . elevators, as steering cable on small boats and steamers, and for industrial and mining devices.²⁷

On such a basis, the plaintiff would automatically lose, as he did in that case. The court treated the problem mainly as one of express warranty and found that the decedent's use did not come within it.

However, an express warranty does not necessarily exclude an implied one, and the fact that a device has a primary use does not necessarily imply that it has no secondary ones. The term "contemplated use" would seem to include every kind of use to which the consumer customarily puts the product. This is clear in the toy cases, where manufacturers have been held responsible for toxic ingredients in toys that were designed for non-oral uses but that children commonly put in their mouths.²⁸

^{24.} Phillips v. Ogle Aluminum Furniture, Inc., 106 Cal. App. 2d 650, 654, 235 P.2d 857, 759 (1951).

^{25.} A leading distributor of gift cartons of fruit prints this on the ends of each carton: "To open pry up staples by inserting screwdriver or similar tool under them."
26. 155 F.2d 445 (3d Cir. 1946).

^{27.} Id. at 448. In warranting his product for use in "all normal flight maneuvers," does the aircraft manufacturer impliedly warn against all use under abnormal flying conditions?

^{28.} E.g., in Victory Sparkler & Specialty Co. v. Latimer, 53 F.2d 3, 5 (8th Cir. 1931), a 3-year-old child died from eating a "spit devil" firework that he had bought from a retailer. In a suit for negligence, the manufacturer unsuccessfully contended that the product had been used other than for its intended purpose. In Spruill v. Boyle-Midway, Inc., 308 F.2d 79, 83 (4th Cir. 1962), the defendant manufacturer was held liable for negligence where the infant decedent had succumbed from drinking its furniture polish. In Hardman v. Helene Curtis Indus., Inc., 48 Ill. App. 2d 42, 198 N.E.2d 681, 691 (1964) (child used hair spray as if it were perfume), the court said, "The question of what is an ordinary use . . . is clearly one of fact."

The special question raised by the *Mannsz* case is: How far can the manufacturer, through accompanying statements, narrow the reasonable expectations for use that might otherwise exist? May a manufacturer thereby limit the range of contemplated use and thus the scope of his legal responsibility?²⁹ Mere directions for use may not be effective for this purpose.³⁰ At this point we encounter aspects of the warning and perhaps even aspects of the disclaimer.

When the manufacturer of rope says that it is useful for manipulating elevators and boats, is he impliedly warning the buyer that it is unsafe for supporting a scaffold, even if the scaffold weighs significantly less than the maximum weight capacity represented by the manufacturer?³¹ Is this how the normal user would read such a statement? Or would he read it as implying only a disclaimer? The difference between an effec-

29. A currently marketed product called "Mark II The Champagne of After Shower Cologne," bottled and packaged as if it were wine, carries this message on the back of the bottle: "Caution: This is not a beverage. Do not take internally. This is a toiletries product." Is there a difference between letting the manufacturer define the product and letting him define the range of contemplated uses?

Suppose that the *MacPherson* wheel was typical of Buick wheels generally, and that, though made of second-quality material, it was strong enough for use at low speeds on smooth roads, though dangerous at high speeds on rough roads. Assume that the manufacturer is trying to make his product to a price, and that he advertises his cars as safe for normal use but cautions purchasers against abuse. He frankly represents his product as one intended for cheap service under optimum conditions, even though he can and should foresee that some purchasers will drive at high speeds on rough roads. The car is skillfully designed within its planned limitations, and the wheel meets its specifications. Nevertheless the wheel collapses, injuring the driver, who is using the car in a foreseeable way. Is the manufacturer liable? He certainly can argue that, if the wheel is as good as it was intended to be, it was not "defective" in the sense that it was atypical, that it fell short of the applicable predetermined standards of quality.

GILLAM, PRODUCTS LIABILITY IN THE AUTOMOBILE INDUSTRY 104-05 (1960). In Lovejoy v. Minneapolis-Moline Power Implement Co., 248 Minn. 319, 79 N.W.2d 688 (1956), the court held in favor of the plaintiff in a negligence action even though he was driving the offending tractor in low gear faster than the maximum speed of 2.3 miles per hour specified in the manufacturer's instructions.

30. E.g., in Farley v. Edward E. Tower Co., 271 Mass. 230, 171 N.E. 639 (1930), the court held, in a negligence suit, that instructions on the container that the defendant's inflammable combs were not designed to be used for the dressing of hair together with a machine that was designed to produce heat did not absolve him from liability for failing to warn the user of fire, even though the plaintiff's hairdresser disregarded that instruction. In McClanahan v. California Spray Chemical Corp., 194 Va. 842, 853, 75 S.E.2d 712, 718 (1953), the court said that "the fact that directions are overlooked or are not meticulously followed does not relieve a manufacturer of the duty to warn of the latent danger common to a class of articles." See Dillard & Hart, supra note 22, at 162. Thus, directions for use may be ineffective to limit contemplated use, at least where the seller has reason to believe that the normal consumer will tend to disregard them.

31. If through the warranty of fitness the law allows the consumer-buyer to define the contemplated uses of the product by communicating his special purpose, should it not allow the seller similarly to define its contemplated uses by an appropriate communication?

tive legal warning³² and a mere disclaimer³³ is that by the former the seller sufficiently educates the consumer that he may be expected to protect himself, whereas by the latter (which has no informational value) the seller seeks only to escape a liability that would otherwise attach. This is probably why courts are more likely to give effect to a warning.

If in the Mannez case weight had been the only problem, there would have been little basis for implying a warning. A hemp rope capable of sustaining a weight of almost 2,000 pounds of elevator should be able to sustain a weight of 650 pounds of scaffold and men. On the other hand, the fact that the rope was made of wire may well have implied a warning against uses involving crimping, kinking, or other sharp folding, risks to which wire ropes are presumably more susceptible. Use of it to support a scaffold may well entail risks unknown to elevators, marine steering equipment, and other uses in which the rope is protected from significant bending by the contours of a wheel. The court stressed the difference between dead loads and live loads, with the latter's "evershifting tensions and strains."34 At the same time, it indicated that the result might have been different had the decedent's use been one "analogous to those specified" by the defendant.85

In any event, if a court allows the seller to limit his responsibility for minimum satisfactory performance by means other than effective directions for use or an actual (though not necessarily express) warning, it is giving effect to what amounts to an implied disclaimer in a situation in which even an express disclaimer should be suspect.

Although a disclaimer is unlikely to be held effective in situations involving an imbalance of bargaining power³⁶ unless it contains the substance of an effective warning, directions for use may be effective in discharging the seller's general duty not to market a defective product. even apart from a warning, if they effectively channel users of the kind in question into a use and manner of use of the product that eliminates or minimizes the risk. Unfortunately, for many products it may be difficult or impossible to write instructions that accomplish that result. The area in which instructions for use may be effective independently of warning may, therefore, remain narrow.

^{32.} On warnings generally, see note 22 supra.

^{33.} On disclaimers generally, see Comment, Disclaimers of Warranty in Consumer Sales, 77 HARV. L. REV. 318 (1963); Comment, Warranty Disclaimers and Limitation of Remedy for Breach of Warranty Under the Uniform Commercial Code, 43 B.U.L. Rev. 396 (1963).

^{34. 155} F.2d at 451. 35. *Ibid*.

^{36.} E.g., Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 404, 161 A.2d 69, 95 (1960).

So far, we have discussed mainly the kind of multiple-use product that has a primary use and peripheral uses that either fall into established patterns or are such that they may be expected to suggest themselves to the resourceful, yet careful, user. If holding the maker responsible for the latter kind of use seems too onerous, remember that the maker can usually protect himself by an appropriate warning or instruction.

The appropriateness of the "contemplated use" requirement is also suggested by multi-purpose products such as hemp rope, ladders, and "all purpose" wire. What are the contemplated uses of a hemp rope? Such a question is not readily answered, and yet the general principle seems clear. The performance standards that define legal defectiveness necessarily depend on the established, recognizable expectations of consumer use. As in many other places in the law, the preservation of reasonable expectations seems to be a controlling legal objective. The practical problem is to define these expectations in particular kinds of cases.

Problems arise even with products that have been put only to their intended general use. The hula skirt involved in Chapman v. Brown³⁷ was sold to a woman who lent it to her diminutive niece to wear to a party. Did the fact that the skirt reached the floor when the shorter woman sat down and thereby touched a lighted cigarette butt mean that the use fell outside the contemplated use and manner of use of this size skirt? The court thought not. Contemplated manner of use would seem to rest on the same basis as contemplated use.

Although the patterns of consumer expectations may be general and vague, they give a sense of direction in an area of the law where the deceptive simplicity of the fact situations tends to obscure the subtleties of legal doctrine.

Contemplated Level of Performance

With respect to a contemplated use and manner of use of a product, consumer expectations also develop as to levels of performance. What is a product's minimum acceptable performance?

The problems of practical application are almost unlimited. How long, for instance, should an abrasive wheel last?³⁸ And consider new automobiles.89 How much "fish tailing" is normal at high speeds?40

^{37. 198} F. Supp. 78 (D. Hawaii 1961).
38. Jakubowski v. Minnesota Mining & Mfg., 42 N.J. 177, 186, 199 A.2d 826, 831 (1964) (possible mis-use or over-use). The problem of over-use was also involved in Cembrook v. Sterling Drug Inc., 231 Cal. App. 2d 52, 41 Cal. Rptr. 492 (1965).

^{39.} On automobiles generally, see GILLAM, op. cit. supra note 29, at 103-42.
40. Some cases . . . involve an allegation that the Corvair, in the 1959 through 1963 models, involves an unsafe design. In these cases it is alleged that the automobile becomes unstable at times because its engine is placed so far to the back of the car that sixty-three per cent of the automobile's weight is concen-

Is a car's tendency to lurch when put in reverse a legal defect?⁴¹ In general, what are the normal consumer expectations that ought to be protected with respect to matters of automobile design?42

Assuming the minimum normal inspection and maintenance, how long is an automobile safe to drive? How long is the steering apparatus, which receives only occasional attention, supposed to operate? Fortunately for the plaintiffs in Henningsen v. Bloomfield Motors, Inc., 48 the car that injured the buyer's wife had been used for only 10 days after purchase. Suppose, instead, that it had been used for 10 months or 10 years.44 Would the result have been different in such a case, if the car had had only "normal" use and had been properly serviced? A similar problem arises for automobile tires.45

A question likely to be increasingly important is the extent, if any, to which the automobile consumer has legally protectable expectations in the event of an accident. If the manufacturer has represented that the roof is seamless, he must make good to the consumer whose head is cut by a jagged seam.⁴⁸ But suppose there is no express undertaking. Evans v. General Motors Corp., 47 the United States Court of Appeals for the Seventh Circuit held that the manufacturer had no duty to replace its X frame with a perimeter frame, which gives better protection against an impact from the side.

Although there is some tendency to discuss such cases in the context of non-contemplated use, automobile accidents are a generally foreseeable

trated over the rear end. It is claimed that in a considerable number of accidents the car tended to oversteer, with the result that the rear started to swing sideways, causing the driver to lose control and crash.

Noel, supra note 13, at 59. Collins v. General Motors Corp. (Cal. Super. Ct. Santa Clara County 1965), described in 14 Def. L.J. 556 (1965). See also Comment, The Corvair and the Law: The Legal Implications of a Design Defect, 3 Houston L. Rev. 233 (1965).

41. Connolly v. Hagi, 24 Conn. Supp. 198, 188 A.2d 884 (Super. Ct. 1963).

42. GILLAM, op. cit. supra note 29, at 104-10.
43. See note 7 supra.
44. In Vandermark v. Ford Motor Co., 61 Cal. 2d 256, 391 P.2d 168 (1964), involving a brake failure, the vehicle was 6 weeks old and had gone 1,500 miles.

45. How far may a particular kind of tire be expected to go under safe driving conditions before a blowout may well be expected? In Dagley v. Armstrong Rubber Co., 344 F.2d 245, 250 (7th Cir. 1965), the court refused to rule that a truck tire that had gone 75,000 miles without rotation was, as a matter of law, beyond the protection of implied warranty.

What are the consumer's reasonable expectations, if any, in tolerance areas? If an aircraft manufacturer, after testing the structural limits of a plane, posts a conservative g load of two-fifths of the estimated maximum load (a rough, general practice), how large a g load, if any, above the posted load may a pilot rely on in unusual weather

conditions before he exceeds the limit of contemplated level of performance?

46. Bahlman v. Hudson Motor Car Co., 290 Mich. 683, 288 N.W. 309 (1939).

47. 359 F.2d 822 (7th Cir.), cert. denied, 385 U.S. 836 (1966). This case is discussed in detail in Note, Manufacturer's Liability for an "Unworthy" Automobile, 52 CORNELL L.O. 444 (1967).

incident to normal use. It seems more appropriate to ask whether the consumer has definable expectations respecting quality of performance under conditions that he does not normally contemplate. Conceivably, these expectations could extend to such matters as appropriate padding, the absence of needless projections, doors that stay shut, and collapsible steering columns. And yet, in the absence of special assurances, how can the consumer be said to expect what it has not been customary for the manufacturer to provide? As it was with safety glass, it seems logical to conclude that consumer expectations will lag behind actual practices, and that the further extension of safety practices designed to minimize the consequences of accidents will depend either on direct regulation or on the development of a broader rationale of seller responsibility. This means that one is not limited to protecting the existing consumer expectations inherent in the concept of reliance, which underlies the seller's current civil obligations as to the quality of the goods he sells.⁴⁸

Although the case law is sparse, it is interesting to speculate on the liabilities attaching to the seller of used goods. Are all used goods sui generis as against the immediate seller, with the result that the consumer is unprotected except by express warranty and the principles of negligence? If not, what are the normal, reasonable expectations of the buyer of a used car respecting, for example, its brakes? That they will perform "for a reasonable time?" That they will perform only long enough to get him off the used-car lot? Beyond express warranty or warning, should it make a difference whether the seller has only a used-car lot, without repair facilities, or operates a new car agency at which he receives used cars in trade? Do normal consumer expectations envisage the dealer's inspection or repair? Should it make a difference that the dealer has partly reconditioned the car?

Determining and describing the patterns of consumer expectation become even more elusive when we move from the specialist in used

^{48.} Although reliance is not expressly written into the warranty of merchantability, it seems to inhere in most sales by a merchant to a consumer.

^{49.} This position was apparently taken by Barni v. Kutner, 45 Del. 550, 76 A.2d 801 (1950) (defective automobile brakes); Armour v. Haskins, 275 S.W.2d 580 (Ky. Ct. App. 1955) (defective automobile brakes); Swensson v. New York, Albany Despatch Co., 309 N.Y. 497, 131 N.E.2d 902 (1956) (defective tractor brakes); Driver v. Snow, 245 N.C. 223, 95 S.E.2d 519 (1956) (exploding stove); Holley v. Central Auto Parts, 347 S.W.2d 341 (Tex. Civ. App. 1961) (wheel rim); Flies v. Fox Bros. Buick, 196 Wis. 196, 218 N.W. 855 (1929) (defective automobile brakes). Uniform Commercial Code § 2-314, comment 3, says, "A contract for the sale of second-hand goods, however, involves only such obligation as is appropriate to such goods for that is their contract description." What this portends is hard to say.

^{50.} In Barni v. Kutner, *supra* note 49, the brakes failed about two hours after purchase. In Armour v. Haskins, *supra* note 49, the brakes locked on the maiden trip after purchase.

goods, such as the used-car dealer (on whom the consumer-buyer is more likely to rely), to the non-specialist, such as the antique dealer or the pawnbroker who realizes on his security. What are the normal expectations of the purchaser of an antique rocking chair? That he can safely rock in it for a short time? Or only that he has something interesting to look at and talk about? In view of the relatively unattractive financial position of most of these sellers, questions such as these are likely to be only rarely litigated. Still, it is interesting to speculate, and the effort may even illumine problems more likely to arise.

Reconditioned goods lie somewhere between new goods and used goods. How long should recapped tires operate without blowing or throwing their treads? What are the responsibilities of such enterprises as the Good Will Industries respecting the quality of the goods they sell? Here, the reconditioner assumes a limited role as manufacturer. Although the specifics of consumer expectation may differ, the general principles would seem to be the same.

As against the original manufacturer of the used goods, does an unreasonably dangerous condition in the original product lose its character as a legal defect merely because the product has already been used by others, or is the special problem only the practical one of tracing the defect to its source? The latter would seem to make the greater sense.

There are other problems. Dean Keeton asked recently whether a product should be considered as "legally defective" when it is one that the consumer would buy and use even knowing of the risk.⁵² The answer would seem to be that "it depends."

If the article is inherently dangerous, like a shotgun or chain saw, there is little reason to say that the product is legally defective. Is a gun necessarily defective because the user accidentally choots himself? Here the consumer assumes the primary burden of protecting himself. On the other hand, suppose that the consumer of a soft drink knows that no manufacturing or bottling process is perfect and that in a small percentage of cases foreign objects get into soft drink bottles. Is this the kind of knowledge that should disqualify him if he swallows broken glass? Clearly not. In the former instance, the consumer's knowledge relates to the specific article that he bought. In the latter, it relates to the product generally and only contingently to the specific article. The known risk is so sporadic and remote that the prudent consumer who wants to lead a

52. Keeton, supra note 4, at 871.

^{51.} See Burke v. Firestone Tire & Rubber Co., 319 Mass. 372, 65 N.E.2d 917 (1946).

normal, sensible life necessarily ignores it.⁵⁸ Despite his knowledge, he properly relies on the manufacturer to protect him. The product is legally defective. The "reasonableness" of a consumer expectation, therefore, may depend on whether the offending condition relates only contingently to the specific article or inheres in it.

How should we treat risks such as Judge Goodrich listed in his concurring opinion in *Pritchard v. Liggett & Myers Tobacco Co.*?⁵⁴ Is whiskey legally defective for consumers who spoil their livers with too much of it? Are salted peanuts and butter legally defective for a consumer who has a cholesterol problem? The obvious answer is no. But why?

Bypassing the obvious approaches of assumption of risk and contributory negligence, we may plausibly say that whiskey, peanuts, and butter are not legally defective, because excessive use is the kind of misuse or non-contemplated use that falls beyond the range of reasonable consumer expectations. For the special class of those who must avoid salt, we can say that the product is not legally defective, if to meet the requirements of the Federal Food and Drug Administration the seller includes a statement on the label that the product contains salt. This is the only kind of warning that is both feasible and helpful to the consumer. Although he is a member of a known and defined class, there is no practicable way in which the seller could know and tell him that he is vulnerable to salt. Once the consumer learns of his weakness from his physician he can protect himself by taking the trouble to read the labels on products.

Vicarious Expectations

Sometimes it seems appropriate to protect, not the reasonable expectations of the consumer himself, but those of a person charged with representing or protecting him in the selection or use of the product.

The most obvious example is a person under a physician's care. For drugs administered or prescribed by the physician, the relevant expectations would appear to be the physician's rather than the patient's. ⁵⁶ Al-

^{53.} Knowledge of risk is not necessarily "assumption of risk." Keeton, supra note 19, at 66-72. This may keep some warnings from being effective. And see notes 83-85 infra.

^{54. 295} F.2d 292, 303 (3d Cir. 1961). See also RESTATEMENT (SECOND), TORTS § 402A, comment i (1965).

^{55.} Some of the relevant considerations here are discussed in James, supra note 2, at 1552-55.

^{56.} E.g., Love v. Wolf, 226 Cal. App. 2d 378, 394, 38 Cal. Rptr. 183, 192 (1964) (chloromycetin). "What is peculiar about a drug product is that while the product is intended for the patient-consumer, the pitch is rarely if ever made to him, but rather is directed toward the doctor in order to influence him to prescribe one brand or class of

though we might even say, in such a case, that the person who administers the product is the "consumer," it would probably be more plausible to assume that for this purpose the physician acts as agent for the consumer.⁵⁷ Similarly, an employer may receive a warning on behalf of his employee.58

A comparable situation exists with potentially dangerous toys. In Crist v. Art Metal Works. 59 the representation that a toy spark pistol was "absolutely harmless" was obviously directed to the parent rather than to the infant son, who while playing with it set fire to his play clothes. In many cases a written warning should be directed to the purchasing parent rather than to the child, and the seller should be able to rely on the parent either to convey the warning orally to the child or to take other appropriate precautions.60

For the same reason, if a risk is already known to the child's parents and is one that they would customarily guard against, the product is not defective merely because the same risk is inadequately appreciated by the child.

Special Consumer Expectations

Legal defectiveness may be a function not only of the condition of the product but also of the kind of purchaser. Although a shotgun is ordinarily an acceptable product in the eyes of the law when it is sold to a mature purchaser, might we not treat it as "legally defective" when it is sold to a person of tender years? As against the retailer, of course, the point is academic because he is clearly negligent in selling the weapon to a child and thus liable regardless of the defectiveness of the product. 61

Suppose that a manufacturer markets a game that would be acceptable in the hands of a 16-year-old but would be latently dangerous in the hands of an 8-year-old, and that he includes no warning on the package. Suppose, also, that the retailer sells the product directly to an 8-year-old, and that the child is injured. 62 In the absence of an appropriate warning, it would seem plausible to consider the product as legally defective, even

medicine over another." Rheingold, Products Liability-The Ethical Drug Manufacturer's Liability, 18 RUTGERS L. Rev. 947, 976 (1964).

^{58.} See Foster v. Ford Motor Co., 139 Wash. 341, 347, 246 Pac. 945, 947 (1926).

^{59. 230} App. Div. 114, 243 N.Y. Supp. 496 (1930).

^{60.} See Morris v. The Toy Box, 204 Cal. App. 2d 468, 473, 22 Cal. Rptr. 572, 575 (1962): "To us it is simply inconceivable that a 10-year-old boy, much less his mother, would be unacquainted with the use of so common an article as the one here in question" (bow and arrow). (Emphasis added.)

^{61.} Binford v. Johnston, 82 Ind. 427 (1882).62. This was essentially the situation in Pitts v. Basile, 55 Ill. App. 2d 37, 204 N.E.2d 43 (1965) (dart injured eye of playmate). However, the suit was in negligence and brought by a bystander.

in the hands of an innocent retailer, and even though in the different context of a sale to an older child or adult it would be entirely acceptable.

Special consumer expectations may relate not only to the manner of use but to the kinds of use to which the product may legitimately be put. Thus, many products intended for other uses by young children should be expected also to be put in the mouth.⁶³

THE REASONABLE EXPECTATIONS OF THE SELLER

In General

So far, we have considered the normal, reasonable expectations of the consumer. What about the normal, reasonable expectations of the manufacturer or other seller? Should these, too, be considered in defining legal defectiveness?

Normally, we can assume that the consumer's expectations are shared, for the most part, by the manufacturer. However, in McCready v. United Iron & Steel Co. 64 the plaintiff administrator was denied recovery because the decedent workman's use of the cross bar of a steel window casement to support himself in some unknown manner was not a "normal use." Although there was testimony that "it was common practice of iron and steel workmen to go up and down on casements because it was cheaper and faster for the contractor," there was no showing that the defendant had reason to know that casement cross bars were being so used. This was enough to defeat a suit in negligence. We can only speculate as to what the court would have decided had the suit been one in warranty. Although steel casements are not designed as ladders, they are commonly used for this purpose. Because in this instance there had been only a tack weld at one end of the offending cross bar, there was some basis for labeling the product as legally defective independently of this particular failure.

In general, a court may be reluctant to impose legal responsibility on the producer for satisfying the reasonable expectations of the consumer with respect to a particular use, unless the producer has had reason to know that the use exists.⁶⁵

^{63.} See note 28 supra.

^{64. 272} F.2d 700 (10th Cir. 1959).

^{65.} Despite the warning in note 14 supra, no reason for distinguishing implied warranty from negligence appears with respect to the narrow question of the foreseeability by the reasonable seller of the reasonable consumer's use and manner of use. See Simpson Timber Co. v. Parks, 34 U.S.L. WEEK 2339 (9th Cir. 1965). Accordingly, Noel supra note 21, at 856-66, seems fully relevant here.

The Seller's Knowledge of the Role Attributed to Him

Also, a court may be reluctant to impose legal responsibility on the producer for satisfying the reasonable expectations of the consumer unless the producer has knowingly participated in generating those expectations in the way attributed to him by the consumer.

The point is well illustrated in Schneider v. Suhrmann, 66 in which the Utah Supreme Court absolved the alleged processor of mettwurst sausage from responsibility for the plaintiff's trichinosis, because the processor had made a good-faith arrangement whereby the retailer undertook to complete the processing of the product. (The retailer did not do so.) Although the product that injured the plaintiff was the identical product that the defendant had sold, it seemed unfair to hold him liable for having sold something called "mettwurst" when under the circumstances he was reasonable in thinking that all he had sold were ingredients for mettwurst to be processed by another.

Even though the reasonable expectations of the plaintiff consumer respecting the quality of the product were unaffected by any private arrangement between the first processor and the processing retailer, it would seem undesirable to hold the former to the responsibilities of a final processor unless he knowingly assumed that role with respect to the product in question. Indeed, to protect the consumer's reasonable expectations without regard to the defendant's knowledge or opportunity for knowledge of the role attributed to him would call for imposing liability even where someone had stolen the incompleted mettwurst from his plant and introduced it into the channels of trade. Under the approach of the Suhrmann case, on the other hand, such an arrangement as the parties entered into would expose the processor to liability only if he had had reason to believe that the retailer was unreliable or that the consumer was otherwise being unreasonably exposed to danger.⁶⁷ Adequate consummer protection does not require that the law attribute to a seller in all cases the role that he has voluntarily assumed, or represented that he has assumed, only in most cases.

A similar situation arose in Schipper v. Levitt & Sons, Inc., 68 where the New Jersey Supreme Court absolved the manufacturer of a gas-fired boiler both of negligence and of warranty or strict responsibility for the scalding of an infant who was using a bathroom washstand. The manu-

^{66. 8} Utah 2d 35, 327 P.2d 822 (1958). And see Schipper v. Levitt & Sons, 44 N.J. 70, 207 A.2d 314 (1965).

^{67.} Champlin v. Oklahoma Furniture Mfg. Co., 269 F.2d 918 (10th Cir. 1959), involving a defective rocking chair, presents the same problem in the context of negligence. 68. 44 N.J. 70, 207 A.2d 314 (1965).

facturer had recommended the use of mixing valves, but the sellercontractor relied, instead, on combination spigots supplemented by inadequate instructions to his customers. Although without mixing valves the boilers were legally defective as sold by the contractor, they were not legally defective as sold by the manufacturer, because the contractor was an experienced builder and the manufacturer had no way of knowing that the contractor would not adopt the recommendation by obtaining valves from another source. Although, again, the unreasonably dangerous product that injured the plaintiff was the identical product that the manufacturer had sold, in neither case was it unreasonably dangerous to the consumer when the manufacturer sold it. The court found that he had properly relied on the contractor to complete an otherwise incomplete heating unit.69

The positions taken in the Suhrmann and Schipper cases seem consistent with Section 402A of the Restatement of Torts, Second, where liability for defective products depends on whether the defect makes the product "unreasonably dangerous" to the user. 70 Mere danger is not enough, and the word "unreasonably"11 might well take into account not only the degree of danger but the circumstances that create it. The matter will be discussed further in connection with allergies.

In interesting contrast to Schneider v. Suhrmann and Schipper v. Levitt & Sons, Inc. is Vandermark v. Ford Motor Co.,72 in which the buyer of an automobile and his sister were seriously injured when the piston in the master brake cylinder failed. The manufacturer of the automobile was held strictly responsible even though the retail dealer had failed to make adjustments, agreed on by him and the manufacturer, that would have avoided or removed the offending condition. court said that the rules of strict liability

apply regardless of what part of the manufacturing process the manufacturer chooses to delegate to third parties. It appears in the present case that Ford delegates the final steps in that process to its authorized dealers. It does not deliver cars to its dealers that are ready to be driven away by the ultimate purchasers but relies on its dealers to make the final inspections,

^{69.} *Id.* at 97, 207 A.2d at 329. 70. See comment *i*.

^{71.} Although the term is more helpfully descriptive, it is almost as hard to determine what is "unreasonably dangerous" as it is to determine what is "legally defective." Thus, it may be more helpful as a restatement of the problem than it is as a solution. In this context, "reasonableness" requires significantly more than mere conformity with accepted patterns of seller conduct, the conventional negligence test. 72. 61 Cal. 2d 256, 391 P.2d 168 (1964).

corrections, and adjustments necessary to make the cars ready for use. Since Ford, as the manufacturer of the completed product, cannot delegate its duty to have its cars delivered to the ultimate purchaser free from dangerous defects, it cannot escape liability on the ground that the defect in Vandermark's car may have been caused by something one of its authorized dealers did or failed to do.⁷³

But is it accurate to say that a manufacturer may not "delegate" the duty of having his "cars delivered to the ultimate purchaser free from dangerous defects"? Unless the dealer was the manufacturer's agent for this purpose, so sweeping a generalization seems inconsistent with the principle that the manufacturer of a product is normally not responsible for slips in the operations of later buyers and users unless he has exposed the consumer unreasonably to the risk. This principle clearly extends to inherently dangerous articles such as explosives and straightedged razors, component parts, and products requiring later processing or reprocessing. Certainly a voluntary allocation of processing, assembling, or protective functions between otherwise unaffiliated sellers and users does not automatically implicate each seller in the operations of later handlers.

The court's statement is no less questionable for being couched in terms of dangerous "defects" rather than dangerous "conditions." A car is not legally defective when the manufacturer sells it merely because it may become so by the time the dealer resells it, any more than unprocessed pork is legally defective when the producer sells it to a restaurant merely because the restaurateur fails to cook it properly. So far as the ambiguous phrase "free from dangerous defects" refers only to the condition of the product when sold by an independent retail dealer, the statement is not true. So far as it refers to the condition of the product when the manufacturer sold it to an independent retail dealer, it begs the question whether the car was legally defective at the time of that sale.

Assuming that the court may have been influenced by the fact that the uncorrected condition came into existence at the factory, we might speculate, in view of the court's sweeping language, on how it would have held had the braking system been installed in the first instance by the dealer or had the defect consisted of a dangerous braking condition created by him. Should liability depend on when the offending condition (as distinct from the taint of legal defectiveness) came into existence? In Schneider v. Suhrmann, the first processor was absolved even though

^{73.} Id. at 171.

the offending condition existed before he acquired the pork ingredients.

The Vandermark opinion makes legal sense only if the manufacturer's arrangement with its dealers put them under its supervisory thumb, if the manufacturer represented itself to the consuming public as a final processor, or if some element in the arrangement unreasonably exposed the consumer to physical risk. Schneider v. Suhrmann, and Schipper v. Levitt & Sons, Inc., too, must stand or fall by this test.

By its language of "delegation," the court in the *Vandermark* case suggested that liability rested on an agency-like relationship in which the manufacturer retained enough supervisory control to warrant the imposition of vicarious liability. Was there an agency there? Did the specifics of the dealership contract take the retail dealer out of the class of independent contractor? The court did not say. However, the general pattern of automobile manufacturer-dealership arrangements suggests that this was probably the case. Besides, the manufacturer may well have represented itself to the consuming public as assuming the role of final processor in all respects. In either case, the *Vandermark* case is distinguishable from the *Suhrmann* and *Schipper* cases and is thus consistent with the broad principle, stated above, for which the latter cases are believed to stand.

Knowledge of the Risk

To be responsible on the ground that his product is "legally defective," how much knowledge must a manufacturer have in addition to some knowledge or opportunity for knowledge about the use to which the plaintiff consumer was putting his product when he was injured? How much, if any, must the manufacturer know about the level of performance that the consumer expects of his product or, conversely, the inci-

^{74.} The dealer also plays an important role in the manufacturing process itself.

[[]I]t is not at all unusual for the dealer's role in the manufacturing process to go so far as the extensive disassembly and correct reassembly of engines and other complex units. Probably a substantial proportion of new cars could not safely or satisfactorily be delivered in the condition in which they leave the factory.

[[]There is] in the automobile industry a manufacturer-dealer relationship so intimate as to raise some question concerning the economic, as distinguished from the legal, genuineness of the dealer's independence. Manufacturers have succeeded in drafting their dealership contracts in such a way as to avoid legal entanglements of an agency relationship while nevertheless maintaining a very substantial degree of control over the dealer organization. Often this control is so extensive as to suggest that an economic reality, if not in legal theory, the dealer is the manufacturer's alter ego.

GILLAM, op. cit. supra note 29, at 12-13, 16. See also Milling, Henningsen and the Predelivery Inspection and Conditioning Schedule, 16 Rutgers L. Rev. 559 (1962).

dence of harm that it might be expected to produce? By "knowledge," we mean the knowledge, not of the particular manufacturer, but of manufacturers of that kind of product generally.

A recent Florida case seems to hold that the seller's state of mind may be ignored. In *Green v. American Tobacco Co.*, ⁷⁵ the Florida Supreme Court, replying to a question certified to it by the United States Court of Appeals for the Fifth Circuit, held that under Florida law a manufacturer's knowledge or opportunity for knowledge of the defective or unwholesome condition of its cigarettes is irrelevant to its liability in implied warranty for resulting cancer.

It should surprise few lawyers that, once causation and a legal defect are established, liability in warranty follows as a matter of course, unless the defendant can develop an affirmative defense such as assumption of risk. The more interesting legal issue is whether the manufacturer's knowledge or reasonable opportunity for knowledge might under some circumstances be considered an element of legal defectiveness itself. This issue was apparently foreclosed by the court's disclaimer of any concern with the issue of merchantability or the scope of the warranty.

Although later in the opinion the court indicated that the sole test of wholesomeness should be the product's "actual safety for human consumption," the opinion does not make clear whether the court fully appreciated the difference between the producer's actual or potential knowledge as a factor in merchantability and his actual or potential knowledge as a factor in liability flowing from an assumed want of merchantability.

To ignore the defendant's lack of knowledge seems sound so far as it relates to a legal defect that has been established independently of the product's design, as it does where food contains a foreign object or is contaminated with bacteria. But where a legal defect cannot be independently established, can the Florida court's "actual safety" test be taken as disregarding the manufacturer's knowledge or opportunity for knowledge?

If we take the *Green* case as a guide, the answer seems to be that the seller may be liable even though he knows nothing beyond the use to which the product will be put. But is this case sound?

Certainly, an exclusive "actual safety" test would be too broad. Inherently dangerous articles such as butcher knives, dynamite, and chain saws can hardly be called "legally defective" merely because their use carries a high incidence of harm.

The issue of knowledge has recently arisen in the drug industry.

^{75. 154} So. 2d 169 (Fla. 1963). See Comment, Cigarettes and Vaccine: Unforeseeable Risks on Manufacturers' Liability Under Implied Warranty, 63 COLUM. L. REV. 515 (1963).

While the merits of Section 402A of the tentative Restatement of Torts, Second, were being debated by the American Law Institute, legal representatives of the drug industry were heard to complain that to impose liability regardless of the industry's and the scientist's lack of knowledge respecting the possibility of harm would greatly discourage the development of new and needed drugs. On the other hand, the argument has been made that not to impose liability would, in effect, give the drug industry "one free shot at the consumer," that is, a chance to exploit the consumer, by using him as a test animal to define the risk. The issue is not readily resolved, and I will not try to do so here. My main point is that the idea of "legal defectiveness" provides an appropriate legal arena in which to resolve the conflicts of social policy that may arise between the interest in protecting reasonable consumer expectations respecting the performance of particular products and the interest in encouraging the development and marketing of needed products."

Gottsdanker v. Cutter Laboratories, Inc., 78 and companion cases involving Salk vaccine might seem to be in point. In that case, the plaintiff had been infected by live virus in Salk vaccine made by the defendant under conditions in which the court assumed that it was impossible, in the existing state of the art and with the procedures approved by the Food and Drug Administration, to have foreseen its presence. Even so, the court held the defendant liable.

However, the Gottsdanker case does not necessarily hold that the defendant's opportunity for knowledge of the danger is irrelevant to the issue of legal defectiveness. Because live virus, like a stone in a can of beans, can easily be branded as a legal defect apart from the actual effects that the vaccine has on particular users, the case can be said to decide, like the Green case, only that once a defect has been independently established the seller's want of knowledge of it is irrelevant. The product is legally defective in such a case because the offending substance is both abnormal and unwelcome. A disease-producing agent certainly does not belong in a product whose only purpose is to prevent the disease. The case, therefore, is distinguishable. Even so, an underlying issue of social policy remains: As against the interest in encouraging the development of needed products, does this kind of consumer expectation warrant

^{76.} My own tentative, undocumented conclusion is that, with the availability of products liability insurance, the burden of consumer protection in these situations is not a serious deterrent to the development and marketing of desirable new products. Cf. RESTATEMENT (Second), Torts § 402A, comment k (1965).

^{77.} In Oregon, the issue has been resolved in favor of the manufacturer. Lewis v. Baker, — Ore. —, 413 P.2d 400 (1966); Cochran v. Brooke, — Ore. —, 409 P.2d 904 (1966).

^{78. 182} Cal. App. 2d 602, 6 Cal. Rptr. 320 (1960).

greater legal protection than the expectation that there will be no unhappy side effects?

The cigarettes involved in the Green case present a related, but different, legal problem. It is not easy to conclude that cigarettes are legally defective. For one thing, cigarettes are not smoked for the purpose of preventing cancer. Also, the carcinogenic aspects of cigarettes, instead of being occasional intruders or even attributable to the design characteristics of a particular brand, apparently inhere in the product itself. Here, we face the possibility of saying that cigarettes as such are legally defective.

Would it be absurd to brand an entire product as legally defective? If an entire brand, such as Holden's beer, 79 could be legally defective because it contained arsenic, why not an entire product? If the consumer is generally ignorant of an inherent risk that he could avoid if properly informed (such as carbon tetrachloride's tendency to injure or kill), it makes sense to say that such a product is ipso facto defective unless it carries an appropriate warning.80 Fortunately, because inherent risks are more likely to be risks that are familiar also to the consumer, the problem faced in the Green case is not likely to arise often and, when it does, it is likely to be temporary. This should comfort the manufacturers of rotary lawn mowers and chain saws.

We might even take the final step and suppose a situation in which the very activity that the product is designed to serve is the real threat. Suppose that it turns out that neither cigarettes nor tobacco as such cause lung cancer and that the mere act of smoking—the exposure of the lungs to smoke or heat from any source—is the actual cause.81 Should the manufacturer of tobacco products have any responsibility if consumers generally are unaware of the danger?

On the one hand, it might be argued that the product itself is not legally defective because it does exactly what it is supposed to-produce smoke. The product is beyond criticism in this respect. Such an approach would class tobacco with inherently dangerous articles, because the activities that they serve are inherently dangerous.

On the other hand, it might be argued (1) that tobacco, at this stage of consumer education, should not be classed with such products, because the consumer is not yet fully alert to the dangers of smoking, and (2) that we should treat tobacco as legally defective if it is unaccompanied by an adequate warning.

 ^{79.} Wren v. Holt, [1903] 1 K.B. 610.
 80. E.g., Tampa Drug Co. v. Wait, 103 So. 2d 603 (Fla. 1958).
 81. See Pritchard v. Liggett & Meyer Tobacco Co., 295 F.2d 292 (3d Cir. 1962).

The difficulty in the *Green* case was that during the period in question scientific knowledge had not yet developed to the point where a warning would have been feasible. Or had it? What should the rule be where the industry has a strong but scientifically unconfirmed suspicion that cigarettes foster cancer? Assuming the uneducated consumer, does the *Green* case mean that a manufacturer is liable unless he takes preventive action that he could not possibly have taken, or that he is liable unless he gives a warning in which he shares his current doubts and suspicions? The tenor of the opinion suggests the former. In the *Pritchard* case, on the other hand, the United States Court of Appeals for the Fifth Circuit suggested that a warning might be appropriate even where only a suspicion exists.⁸²

However we resolve the problem of the *Green* case, it would seem safe to conclude that if the producer has actual knowledge of a significant risk of which the consumer is ignorant, the former should be liable to the injured consumer if (1) he fails to remove the offending condition, provide a safety device, or include effective instructions for use or a warning, and (2) the consumer is injured as a result. This rule may be the answer to the problems of swerving automobiles, overturning tractors, and broken surgical pins.

Although this proposition seems conservative, even it may need an exception. The point can be illustrated with the blood cases. It has been said that "probably the most serious risk relating to blood transfusion which defies medical science and preventive measures is the danger of transmitting hepatitis. . . . [A] healthy person who has no history of hepatitis or jaundice and no clinical evidence of liver disease may nevertheless carry the virus of hepatitis."83 In Perlmutter v. Beth David Hospital,84 the court held that the defendant was under no warranty obligation because the contract was one for services and thus not one for the sale of blood. The situation is interesting because, on the one hand, the defendant hospital was fully aware of the danger while, on the other, the plaintiff was not. Even if the transaction is viewed as a sale, the result can be rationalized on the ground that, in view of the far greater risks arising from not having the blood transfusion, and in view of the unsettling effect that the information might have had on the patient, a warning to him not only would have been useless but might have been a

^{82.} Id. at 300.

^{83.} Hirsch, Responsibilities in Blood Transfusion, 1:2 Medicolegal Digest 21, 23 (1960).

^{84. 308} N.Y. 100, 123 N.E.2d 792 (1954), criticized by Wade, supra note 2, at 20.

positive detriment. Similarly for the Pasteur treatment for rabies.85 However, a warning to the attending physician on behalf of the patient might be an appropriate requirement in some cases.

Suppose that the manufacturer, through no fault, shares the consumer's ignorance of a risk that scientists have discovered. Suppose, too, that the risk is removable or that a useful warning or instruction would be feasible. Either way, we can justify liability on the ground that it provides the manufacturer a general incentive to keep abreast of scientific knowledge and to act accordingly. With this objective, it makes sense to impose liability on a defendant for failing to improve the performance of his product or give a warning or an instruction even when he lacks the knowledge necessary for doing either. Without the improvement or warning, the product is legally defective. The courts seem to be willing to go this far.

Suppose that at the time of sale the risk was unknown even to scientists, but is known by the time of trial. The policy argument for imposing liability in such a case is similar, except that the incentive here would be not merely to keep abreast of existing scientific knowledge, but actively to foster scientific research. This assumes that the general class of producers of which the defendant is a member is financially formid-Faced with this problem in Lartique v. R. J. Reynolds Tobacco Co., 86 the United States Court of Appeals for the Fifth Circuit denied recovery. It said that to recover the plaintiff must "show that the warranted product contained an element from which, on the basis of existing human knowledge, harm might be expected to flow."87

The Lartique case seems to stand for the general proposition that strict liability should not be imposed unless the risk in question was known, at the time of sale, at least to scientists.88 If this view is accepted, it probably makes a significant difference, however, only where the injury incurred is an undesirable side-effect, such as cancer, hepatitis, or Here, the consumer has no affirmative expectation that the manufacturer has directly undertaken to meet. Any assumption that the use will result in no undesirable side effect normally is tacit and

^{85.} Treatment may lead to serious permanent impairment, but this seems preferable to an otherwise invariable and painful death. See Carmen v. Eli Lilly & Co., 109 Ind. App. 76, 32 N.E.2d 729 (1941), where both physician and patient were adequately warned; Restatement (Second), Torts § 402A, comment k (1965).

86. 317 F.2d 19 (5th Cir. 1963).

^{87.} Id. at 35.
88. "For strict liability to apply there must be foreseeability of harm. . . . [The manufacturer] is an insurer against foreseeable risks—but not against unknowable risks." Id. at 36, 37. See also Ross v. Philip Morris & Co., 328 F.2d 3, 13 (8th Cir. 1964); Connolly, The Liability of a Manufacturer for Unknowable Hazards Inherent in His Product, 32 Ins. Counsel J. 303 (1965).

unconscious.

Where, on the other hand, injury results from a defect that frustrates normal, bargained-for performance, as with the Electras or Salk vaccine, there is less reason to talk about strict tort liability and more reason to talk about what in common expectation the seller has affirmatively undertaken to deliver. Should not the law be stricter in such a case? Indeed, even if we stay with strict tort liability as tempered by general foreseeability, is not every injury in such a case ipso facto "foreseeable" in the sense used by the court?89

Let us take the final step and assume that scientific knowledge of the risk is lacking even at the time of trial. Here, of course, unless the courts are willing to change their current approach, the plaintiff will lose simply because, without showing a definable threat to a known class, he cannot hope to show that he is other than an idiosyncratic or the victim of pure accident.

The law withholds protection from an idiosyncratic plaintiff whenever defectiveness can be established only by reference to the fact of the plaintiff's injury.90 In such cases there is no definable class of plaintiffs that producers or scientists could use, even in hindsight, as a basis for prediction or otherwise to guard against future harm. Even a warning or instruction would be not only impossible but inconceivable. In such cases, the only policy reason for imposing liability would be some theory that isolated, individual losses (as distinct from those resulting from definable risks) should be shifted to enterprises capable of absorbing or spreading them. No products liability case that I know of has gone so far.91 There has been much general talk about "risk spreading," but risk spreading assumes a definable risk, a minimum degree of "typicality"92 that provides the necessary actuarial basis for insurance. A definable risk, in turn, assumes a class of victim definable by the time of trial at the latest.

This explains, I think, the significant legal difference between the

^{89.} The court (317 F.2d at 36 n.36) relied heavily on Prosser, The Assault Upon the Citadel (Strict Liability to the Consumer), 69 YALE L.J. 1099, 1143 (1960): "A more difficult problem is that of what Professor Ehrenzweig has called 'typicality' of the injury. Put in more ordinary language, this means the foreseeability of the harm—the seller's reasonable anticipation of it as a normal consequence of the consumption or use of his product if it should turn out to be defective." The consequences of simple nonperformance are easier to foresee than the consequences of an unforeseeable side effect. Although the specific defect in the Electras or in Salk vaccine was unforeseeable, general failure of performance was not. In references to the "foreseeability" of something, it is not always clear how general a category of risk is being referred to.

^{90.} On hypersensitivity generally, see Dickerson, op. cit. supra note 16, at 211-30. 91. At least one writer has suggested the possible desirability of so extending liability. James, supra note 2, at 1558.
92. Ehrenzweig, Negligence Without Fault, 54 CALIF. L. Rev. 1422, 1460 (1966).

person who is allergic and the person who is merely idiosyncratic. The allergy cases are often misunderstood because, although most of them can be read as denying relief to persons who are allergic, many plaintiffs have failed because they failed to show that they were members of identifiable classes; that is, that they were other than idiosyncratics.⁹³

To go farther than protecting identifiable classes would be to shift the individual losses resulting from pure accidents, which are by definition unavoidable, unpredictable, and uninsurable. To base civil liability solely on causation in fact would, it seems to me, go beyond the feasible outer limits of strict liability. (Whether strict liability should go as far as these outer limits is still being debated.)

A thoroughgoing system of "enterprise liability" based solely on causation in fact, and thus uninhibited by considerations of remoteness or otherwise, would be judicially unmanageable. Certainly it would make no administrative sense when viewed alongside the alternative possibility of a causation-free, governmentally administered system of accident indemnity. (The wisdom of so pervasive an approach is not in issue here.) Even workmen's compensation is based on definable, and thus measurable, risks.

If this analysis is sound, what basis is there for looking at the state of scientific knowledge as of the time of trial rather than the time of sale, when the seller could more reliably determine the relevant costs? The later date has the advantage of providing the maximum incentive to advance scientific knowledge on behalf of the consumer without eliminating the seller's opportunity, in future sales, to spread the costs of compensation as figured from reasonably predictable factors. The argument against it is that it encourages initiation of scientific research before the specific risks that would give it direction are adequately defined. Which view is persuasive would seem to depend on whether so diffuse an incentive is materially effective. Determining the costs of the effort, on the other hand, creates no serious problem. They could be spread even before any specific risk emerged, because it seems likely that the scope of scientific inquiry would be defined by practical economic considerations, without regard to the specifics of as yet undetermined risks.

Because the allergy cases are those closest to the vanishing point of definable and legally treatable classes, it is interesting to consider the allergy problem further.

^{93.} E.g., Howard v. Avon Prod., Inc., 155 Colo. 444, 395 P.2d 1007 (1964). On allergy generally, see Dickerson, op. cit. supra note 16, at 215-230; Freedman, Allergy and Products Liability (1961); Freedman, Allergy and Products Liability Today, 24 Ohio St. L.J. 479 (1963).

A commonly made objection to granting relief in cases where allergy is proven is that the allergic person, like the idiosyncratic, is inherently abnormal. The plaintiff, on the other hand, must ordinarily meet the standards set for people in general. That is why we have such doctrines as contributory negligence.

But the problem is not so much one of abnormality as it is one of definability and legal treatability. If a class of consumer that needs special protection is both known and amenable to protection, why should the law withhold relief merely because the great bulk of people do not fall within it? I assume here that the abnormality does not consist of substandard, imprudent, or culpable conduct. The real problem in the allergy cases, therefore, is not to contain abnormality, but to define what can be done to protect the consumer. If the law can provide special protection for young children, why not for persons who are allergic?

The other policy objection to imposing liability for allergy harm relates to the allergent that inheres in a natural, unprocessed product, such as fresh strawberries marketed by a financially well-heeled grower. Should such a grower be liable even to a member of a well-known class? Certainly there is no offending ingredient that could be removed or changed.

Strawberries, of course, are unlikely to cut a big figure in the arena of products liability. The results are not severe, and most allergic consumers are as fully aware of the risk as are the growers. Even so, let us suppose that the results are severe and that the typical allergy sufferer is unaware not only of his condition but that the product is potentially harmful to him. Would it be appropriate to hold the producer or distributor in such a case?

Here it arguably makes sense to distinguish between what inheres in a natural product and what is included by the manufacturer in a fabricated one. 96 Although this may smack of the now widely repudiated "natural-foreign" test of legal defectiveness, a court might reasonably

need not respond in damages." (Emphasis added.)

95. "[T]here is a duty to exercise reasonable care to warn of potential dangers from use even though the percentage of users is not large." Love v. Wolf, 226 Cal. App. 2d 378, 395, 38 Cal. Rptr. 183, 193 (1964).

96. In Crotty v. Shartenberg's-New Haven, Inc., 147 Conn. 460, 466, 162 A.2d 513, 516 (1960), the court distinguished "an article or product in its natural state" from a manufactured product containing "a chemical or other substance." See also Keeton, supra note 4, at 863, 866; Sedgwick, Conley, & Sleight, Products Liability: Implied Warranties, 48 Marq. L. Rev. 139, 165 (1964).

^{94.} In Ray v. J. C. Penney Co., 274 F.2d 519 (10th Cir. 1959), the following instruction was approved: "one who sells a product on the market, knowing that some unknown few, not in an identifiable class which could be effectively warned, may suffer allergic reactions or other isolated injuries not common to ordinary or normal persons, need not respond in damages." (Emphasis added.)

hold that the defendant manufacturer is liable for harm caused by the failure of his product to meet the reasonable expectations of a definable class of consumers only if he made the product or otherwise helped to create or inflate the expectations of those consumers with respect to that contemplated use. Would it not make sense to condition legal defectiveness and attendant liability at least in part on the defendant's participation, beyond merely selling the product, in fostering the consumer expectations that his product disappointed? In the absence of express warranty, this would absolve the producers and distributors of strawberries. It might also absolve the sellers of trichinous pork.

On the other hand, such an approach would seem to be undermined by the practicability of a warning. On balance, therefore, would it not make better sense to impose liability even here?

Conclusion

If this analysis is sound, we may conclude, as a reasonable synthesis of present-day trends, that a product is "legally defective" if it meets the following conditions:

- (1) The product carries a significant physical risk to a definable class of consumer and the risk is ascertainable at least by the time of trial.
- (2) The risk is one that the typical member of the class does not anticipate and guard against.⁹⁷
- (3) The risk threatens established consumer expectations with respect to a contemplated use and manner of use of the product and a contemplated minimum level of performance.
- (4) The seller has reason to know of the contemplated use and, possibly where injurious side effects are involved, has reasonable access to knowledge of the particular risk involved.
- (5) The seller knowingly participates in creating the contemplated use, or in otherwise generating the relevant consumer expectations, in the way attributed to him by the consumer.

Specific issues of strict liability that remain unresolved can be settled, compatibly with the established elements of legal doctrine and a fair balancing of competing interests and expectations, by appropriately shaping and refining the doctrine of product inadequacy that comprises the

^{97.} The "natural-foreign" test, formally invoked by some courts (see note 6 supra), appears to be a perversion of this standard.

developing idea of "legal defect." Then we will know, even better than we do today, "how good a product has to be."