Notes

Adding a Risk/Utility Analysis to the Consumer Expectation Test in Design Defect Cases

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In *Dart v. Wiebe Manufacturing, Inc.*,[1] the Arizona Supreme Court examined whether strict products liability claims involving design defects differ from ordinary negligence claims where the consumer expectation definition of defect is not used or is inappropriate.[2] This issue has become increasingly prevalent in strict liability cases as courts have shown a growing dissatisfaction with the consumer expectation test as a method of identifying actionable design defects, and have, therefore, strived for an alternative formulation while trying to maintain strict liability principles.

This Note examines the manner in which courts have analyzed strict liability claims involving design defects using a consumer expectation test and a risk/utility balancing test. It then discusses the development of design defect analysis in Arizona before the Arizona Supreme Court decided *Dart*. Although in *Dart*, the Arizona Supreme Court adopted a two-pronged analysis for design defect cases, it left several issues unresolved. This Note will look at two of those issues: the application of the consumer expectation test under *Dart's* two-pronged approach; and, the potential conflict between the hindsight test adopted by *Dart* and the affirmative state-of-the-art defense permitted by the Arizona Products Liability Statute.[3]

THE LEGAL SETTING IN DESIGN DEFECT CASES

In the 1960s, the *Restatement (Second) of Torts* and many state courts'[4] adopted strict liability based in tort, as distinct from strict liability based in

1. 147 Ariz. 242, 709 P.2d 876 (1985).

2. *See* Supplemental Brief for Appellee at 1, "[t]he [Arizona] Supreme Court has directed the parties to address the correctness of including negligence principles in the product-liability instructions given to the jury and has asked them to discuss whether the Arizona case law is consistent."

3. ARIZ. REV. STAT. ANN. §§ 12-681 to -686 (1982). Discussed *infra* text accompanying notes 71 to 78.

4. *See, e.g.*, Greenman v. Yuba Power Products, Inc., 59 Cal. 2d 57, 377 P.2d 897, 27 Cal. Rptr. 697 (1963). *See also* 1 CCH PROD. LIAB. RPTR. 4015-4016 for citations to adopting cases and statutes in other states; Birnbaum, *Unmasking the Test for Design Defect: From Negligence [to Warranty] to Strict Liability to Negligence*, 33 VAND. L. REV. 593, 597 (1980).

warranty. These authorities relied on three public policy rationales: 1) the costs of injuries from products are best borne by manufacturers since they are in a position to distribute the losses of the few among the many purchasers of the products; 2) the possibility of liability serves as an incentive to manufacturers to reduce injuries; and 3) proof of the existence of negligence on the part of the manufacturer is difficult and costly and, thus, should not be required.[5]

The *Restatement's* test for determining the actionability of a product—any product in a defective condition unreasonably dangerous to the user or consumer—has been difficult to apply to a claim of a defect in the design of the product as opposed to a defect arising in the manufacturing process.[6] When the courts are faced with a manufacturing defect, they have a built-in benchmark of defect, i.e., the product differs from all of the other products. No comparable benchmark exists to assist courts in giving legal meaning to the term "defect" in claims based on design defects.[7]

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5. PROSSER AND KEETON ON THE LAW OF TORTS § 98, at 692 (W. Keeton 5th ed. 1984) [hereinafter PROSSER & KEETON]. For a critique of the conventional "policies" said to support strict liability for products, see Owen, *Rethinking the Policies of Strict Products Liability*, 33 VAND. L. REV. 681 (1980). A catalogue of more specialized articles dealing with the complex economic and jurisprudential issues underlying these rationales is contained in Birnbaum, *supra* note 4 at 595, n. 18.

6. RESTATEMENT (SECOND) OF TORTS § 402(a) [hereinafter RESTATEMENT]. As Dean John Wade points out:

> As a term of art "defective" gives little trouble when something goes wrong in the manufacturing process and the product is not in its intended condition. It is then defective in the normal sense of the expression. The condition of a product, however, may also be actionable if the product's design is not sufficiently safe or if it does not have adequate instructions or warnings . . . [there] the manufacturer intended the product to be in its present condition, and to assert that it is defective or that it has a defective design is to use the term in a special sense that prevents its being very helpful in determining whether the product should be found to be actionable.

Wade, *On Product "Design Defects" and Their Actionability*, 33 VAND. L. REV. 551, 551-552 (1980).

Discussion of inadequate instructions or warnings as product defects is beyond the scope of this Note. The Arizona Supreme Court's order granting review in Gosewisch v. American Honda Motor Co., Inc., No. 18249—PR, Oct. 8, 1985, suggested that it would undertake a general review of the elements of liability for inadequate warning.

7. The Louisiana Supreme Court recently recognized a new category of strict products liability cases: a manufacturer can be held liable for a product that is "unreasonably dangerous per se." Halphen v. Johns-Manville Sales Corp., 484 So. 2d 110 (La. 1985), *certified from* 755 F.2d 393 (5th Cir. 1985), *aff'd*, 788 F.2d 274 (5th Cir. 1986). The court contrasts this category with the three more traditional categories: manufacturing defect, failure to warn defect, and design defect (a design unreasonably dangerous in light of other safer products on the market or other safer designs). A product is 'unreasonably dangerous per se' if "a reasonable person would conclude that the danger-in-fact of the product, whether forseeable or not, outweighs the utility of the product." 484 So.2d at 114. The court calls this the purest form of strict liability since the focus is truly on the product and not on the manufacturer's conduct. Therefore, if the plaintiff proves that a product [in the *Halphen* case, asbestos] is 'unreasonably dangerous per se' then "a manufacturer may be held liable for injuries caused by [that] product, although [it] did not know *and reasonably could not have known* of the danger." 484 So.2d at 116 (emphasis added). In applying the Louisiana court's analysis, the Fifth Circuit held that a manufacturer may not rely upon a state-of-the-art defense once the plaintiff proved that the product was 'unreasonably dangerous per se' and that asbestos, at least, satisfies that definition. 788 F.2d at 275. *See infra* note 74 and accompanying text for a discussion of the implications of *Dart* for Arizona's state-of-the-art defense.

For an extensive listing of the many articles discussing the appropriate test for design defects, see Twerski, *Seizing the Middle Ground Between Rules and Standards in Design Defect Litigation: Advancing Directed Verdict Practice in the Law of Torts*, 57 N.Y.U. L.R. 521, n. 1 (1982).

THE TEST FOR A DESIGN DEFECT

Generally, the courts have adopted one of two tests, or some combination of them, for determining whether a design defect is actionable: the consumer expectation test or the risk/utility balancing test.

Consumer Expectation Test

The *Restatement* definition of "consumer expectation," which is followed by most courts, is contained within section 402(A), comment i: "The article sold must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics."[8] The reasonable expectations of that ordinary consumer[9] may be those of a hypothetical reasonable person, or those of the particular plaintiff at bar.[10]

Despite the *Restatement's* explicit reliance upon the consumer expectation test and the courts' longstanding experience with it, some courts have found it to be an inadequate measure of a product's actionability, either because of problems inherent in the test, or because it does not apply to the myriad design defect fact situations before them. Specific criticisms of the test include its inherent ambiguity with respect to when it applies and to whom;[11] its lack of distinction from a warranty or a negligence analysis;[12] and its unfairness in denying recovery for harm caused by an open and obvious danger.[13] Specific instances in which the test may not apply to the facts include cases in which a consumer could not have been expected to have formed an expectation with regard to the particular defect, as where the injured party is an innocent bystander or where a new product is involved and no expectation has yet formed;[14] or, cases in which an expectation may

8. *Supra* note 6, at comment i. *See also*, Birnbaum, *supra* note 4, at 611 n. 86 (a catalogue of articles regarding the consumer expectation test); Twerski, *From Risk-Utility to Consumer Expectations: Enhancing the Role of the Judicial Screening in Product Liability Litigation*, 11 HOFSTRA L. REV. 861 notes 140 and 141 and accompanying text (1983).

9. In defining the ordinary consumer, courts have included not only the original purchasers or users of the product, but also bystanders and employees. *See, e.g.*, Caruth v. Mariani, 11 Ariz. App. 188, 463 P.2d 83 (1970) (bystander case). Donald Dart was an employee.

10. *See* Birnbaum, *supra* note 4, at 611, discussing Young v. Tide Craft, Inc., 270 S.C. 453, 242 S.E.2d 671 (1978).

11. Henderson, *Product Liability and Admissibility of Subsequent Remedial Measures: Resolving the Conflict by Recognizing the Difference Between Negligence and Strict Tort Liability*, 64 NEB. L. REV. 1, 11 (1985) (the ambiguity in the consumer expectation test argues for its abandonment in favor of a risk-utility test, or more explicit content to consumer expectations); *see, e.g.*, General Motors Corp. v. Turner, 584 S.W.2d 844 (Tex. 1979) (elimination of the consumer expectation prong of the test for *design* defects in Texas and adoption of a risk/utility balance as the sole test); MODEL UNIFORM PRODUCT LIABILITY ACT (UPLA), § 104B, *reprinted in* 44 Fed. Reg. 62714, at 62721-62724 (1979) ("The consumer expectation test takes subjectivity to its most extreme end. Each trier of fact is likely to have a different understanding of abstract consumer expectations.").

12. For a discussion of the warranty aspects of the test, see Wade, *On the Effect in Product Liability of Knowledge Unavailable Prior to Marketing*, 58 N.Y.U. L.R. 734, 742 (1983); Wade, *supra* note 6, at 567; Fischer, *Products Liability—The Meaning of Defect*, 39 MO. L. REV. 339, 348 (1974). The test also may be no different than a negligence test because an ordinary consumer may not expect more than the exercise of reasonable care by the manufacturer. Henderson, *Strict Products Liability and Design Defects in Arizona*, 26 ARIZ. L. REV. 261, 265 (1984); Schwartz, *Foreword: Understanding Products Liability*, 67 CAL. L. REV. 435, 479 (1979).

13. PROSSER & KEETON, *supra* note 5, at 698.

14. Knitz v. Minster Machine Co., 69 Ohio St. 2d 460, 464, 432 N.E.2d 814, 818, *cert. den. sub*

have formed, but the consumer is not in a position to avoid the danger, as where an industrial worker (such as Donald Dart) must work on a certain machine as part of his job.[15]

Risk/Utility Test

A number of courts have turned to a risk/utility balancing test as more in keeping with the underlying policy rationales for strict liability. Under such a test, attention is focused on the product itself, not on the conduct of either a reasonable consumer or a reasonable manufacturer.[16] Under this test, a product is defective if a reasonable person evaluating th product with all information available at the time of trial would conclude that the danger outweighs the benefits of that product.[17]

This test sounds strikingly similar to the fundamental negligence standard.[18] Some courts have expressly held that once a risk/utility analysis is injected into a design defect case, it has become a negligence analysis.[19] The

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nom., Cincinnati Milacron Chemical, Inc. v. Blankenship, 459 U.S. 857 (1982). *See also* Cremeans v. International Harvester Co., 6 Ohio St. 3d 232, 452 N.E.2d 1281 (1983) (reaffirming *Knitz*); Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825, 834-838 (1970) (a consumer might have no idea how safe a product could be made).

15. The Supreme Court indicated that Dart was ordered to work on the machine at issue in the case, 147 Ariz. at 243, 709 P.2d at 877.

16. One commentator, however, has described this as "semantic gymnastics," Birnbaum, *supra* note 4, at 601. *See supra* note 7 for a discussion of the Louisiana Supreme Court's recent designation of a new category of 'pure' strict liability in which the focus is on whether the *product* is 'unreasonably dangerous per se.'

17. *See generally*, PROSSER & KEETON, *supra* note 5, at 698, n. 22. In his seminal article in 1970, Dean Wade suggested seven factors to use in determining the risk/utility balance that have now become ingrained into courts' analyses. Wade, *supra* note 14, at 837-38. The jury instruction at issue in *Dart* relied on these factors. The seven factors are:

1) The usefulness and desirability of the product.
2) The likelihood of injury from the product and the probable seriousness of that injury.
3) The availability of a comparable substitute.
4) The manufacturer's ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive.
5) The user's ability to avoid danger by the exercise of care in the use of the product.
6) The user's anticipated awareness of the dangers inherent in the product because of their open and obvious nature.
7) The feasibility of loss distribution by the manufacturers.

In response to *Dart*, the Recommended Arizona Jury Instructions [hereinafter RAJI] have been revised, *see infra* note 59 for a discussion of the new instructions. One of the issues left open in the new instruction is whether these risk/benefit factors should be explicitly stated in a risk/benefit design defect instruction. The committee was divided on the issue, some members arguing that *Dart* did not propound the factors as exclusive, but left them to argument by counsel. Other members felt that it would be error to refuse to instruct the jury explicitly that it may consider the applicable factors in weighing the question of unreasonable danger. RAJI, 1986 Revision (as approved by the State Board of Governors), Appendix to Product Liability Instruction 2, Issue 6.

18. "It thus is fundamental that the standard of conduct which is the basis of the law of negligence is usually determined upon a risk-benefit form of analysis." PROSSER & KEETON, *supra* note 5, at 173, citing RESTATEMENT §§ 291-293, and United States v. Carroll Towing Co., 159 F.2d 169 (2nd Cir. 1947).

19. *See, e.g.*, Jones v. Hutchinson Manufacturing, Inc., 502 S.W.2d 66, 69-70 (Ky. 1973); PROSSER & KEETON, *supra* note 5, at 700 n. 32. *See infra* notes 27-32 and accompanying text for a discussion of Brady v. Melody Homes Mfr., Inc., 121 Ariz. 253, 589 P.2d 896 (Ct. App. 1978). In *Brady*, Division Two of the Arizona Court of Appeals came to this same conclusion which served as a counterpoint to the supreme court's analysis in Dart. The UPLA also adopts a negligence/risk-utility balancing approach for design defect claims, focusing on a pure negligence or forseeability analysis and rejecting any imputation of knowledge to the manufacturer. UPLA *supra* note 11, at 62724.

courts and commentators that apply the test to strict liability note, however, that in contrast to the negligence case, the scienter—the present knowledge of the dangerous condition—is supplied as a matter of law to the manufacturer.[20]

THE DESIGN DEFECT TEST IN ARIZONA

In 1968, the Arizona Supreme Court adopted strict tort liability.[21] Before its 1976 decision in *Byrns v. Riddell, Inc.*,[22] the court provided little guidance to the lower courts with respect to the proper test for determining whether a product was defectively designed.[23] Instead, the Arizona courts consistently relied upon *Restatement* section 402(A) and its formulation of the standard for liability. Nonetheless, they struggled with giving a strict liability definition to 'unreasonably dangerous.'[24] As a general rule, before *Byrns*, if a product was dangerous beyond what an ordinary consumer would

20. This test is often referred to as the Wade-Keeton prudent manufacturer test. *See*, Birnbaum, *supra* note 4, at 617-18. Both scholars have frequently discussed the need to impute knowledge to the manufacturer in order to distinguish strict liability from negligence. *See, e.g.*, Keeton, *Manufacturer's Liability: The Meaning of 'Defect' in The Manufacture and Design of Products*, 20 SYRACUSE L. REV. 559, 568 (1969); Keeton, *Product Liability and the Meaning of Defect*, 5 ST. MARY'S L.J. 30, 37-38 (1973); Wade, *Strict Tort Liability of Manufacturers*, 19 S.W.L.J. 5, 15 (1965); Wade, *supra* note 14, at 834-38. Dean Wade has recently pointed out, however, that this oft-cited Wade-Keeton test is nothing of the sort—in fact, the two men have differed substantially over the magnitude of the knowledge that would be imposed on the manufacturer, Wade, *supra* note 12, at 761-64.

In Halphen v. Johns-Manville Sales Corp., Inc., 484 So. 2d 110 (La. 1986), discussed *supra* note 7, the Louisiana Supreme Court identified a new category of product defect that would warrant imposing liability for *scientifically unknowable* dangers—a product whose risks outweigh its utility such that it is 'unreasonably dangerous per se.' This category does not, however, include all risk/utility balancing cases. The court specifically excludes design defect cases that turn on the availability of alternative designs or safer products, and failure-to-warn cases.

21. O.S. Stapley Co. v. Miller, 103 Ariz. 556, 447 P.2d 248 (1968) (Arizona Supreme Court adopts theory of strict liability as set forth in RESTATEMENT section 402(A)). *See also*, Rocky Mountain Fire and Casualty Co. v. Biddulph Oldsmobile, 131 Ariz. 289, 292, 640 P.2d 851, 854 (1982); Amburgery v. Holan Division of Ohio, 124 Ariz. 531, 532, 606 P.2d 21, 22 (1980); Rogers v. Unimac Co. Inc., 115 Ariz. 304, 307, 565 P.2d 181, 184 (1977).

22. 113 Ariz. 264, 550 P.2d 1065 (1976).

23. Henderson, *supra* note 12, at 265 ("[e]ven though the [Arizona Supreme] Court embraced Section 402(A) in 1968, it was not until the *Byrns* case that explicit mention was made of an actual standard to be employed in Arizona to determine when a product contained a defect that would give rise to strict liability.") (citations omitted).

24. The RESTATEMENT'S formulation of the standard for liability is "any product in a defective condition unreasonably dangerous," RESTATEMENT, *supra* note 6. Some cases in Arizona have passed over the question of whether a defect exists, and begun their analysis with whether the defect is 'unreasonably dangerous.' *See, e.g.*, Vineyard v. Empire Machinery Co., 119 Ariz. 502, 581 P.2d 1152 (Ct. App. 1978) (because the parties failed to brief the question of the existence of the defect, the court accepted their tacit recognition of the defect and examined the question of unreasonable danger); *but see* Rhodes v. International Harvester Co., 131 Ariz. 418, 641 P.2d 906 (Ct. App. 1982) (plaintiff had a failure of proof as to whether an established defect was the proximate cause of the fatal injuries).

Despite the difficulty, however, Arizona has specifically rejected California's approach of abolishing the unreasonably dangerous requirement as an element of the plaintiff's proof. Byrns v. Riddell, Inc., 113 Ariz. 264, 266, 550 P.2d 1065, 1067 (1976) (rejecting Cronin v. J.B.E. Olson Corp., 8 Cal. 3d 121, 501 P.2d 1153, 104 Cal. Rptr. 433 (1972)). *See also*, *Dart*, 147 Ariz. at 244 n.1, 709 P.2d at 878 n.1, *and* Readenour v. Marion Power Shovel, 149 Ariz. 442, 447, 719 P.2d 1058, 1064 (1986).

See RAJI, *supra* note 17, 1986 Revision (as approved by the State Board of Governors), Appendix to Product Liability Instruction 2, Issue 7, for a discussion of the debate regarding whether 'defect' and 'unreasonable danger' need to be or even can be separately and distinctly defined. The

have expected, it was unreasonably dangerous and, therefore, defective.[25]

In *Byrns*, the supreme court analyzed the law of strict liability in tort. The court reviewed the consumer expectation test, and mentioned for the first time, the availability of a risk/utility test under a strict liability theory. It did not, however, specifically adopt the latter test for Arizona.[26] Consequently, since the supreme court did not precisely indicate which definition was controlling in determining 'unreasonably dangerous,' the lower courts continued to debate which test applied.[27]

In *Brady v. Melody Homes Mfr.*,[28] the court of appeals squarely faced the issue whether a case may proceed under a strict liability analysis where the consumer expectation test is inapplicable because no consumer expectation had been violated. *Brady* adhered to the consumer expectation test as the strict liability test for design defect. It held that where the design defect does not fall within the *Restatement's* consumer expectation test, strict liability does not apply; therefore, the case must proceed under a traditional negligence analysis.[29] Additionally, the *Brady* court clearly stated that a risk/utility test would not be an acceptable alternative test. To support its holding, the *Brady* court reasoned that once a court abandoned the consumer expectation test, and relied instead upon a balancing test of risks and benefits, a court must focus upon the reasonableness of the manufacturer's conduct. No matter how such a risk/utility balance is phrased, it is ultimately a negligence analysis.[30] Moreover, once such an analysis is adopted, the purposes of strict liability are no longer served.[31]

The *Brady* court acknowledged that the Arizona Supreme Court had, in

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new instruction interprets *Dart* as implying that the consumer expectation and risk/benefit tests are sufficient to define both defect and unreasonable danger.

25. 113 Ariz. at 266-67, 550 P.2d at 1067-68. *See, e.g.*, Mass v. Dreher, 10 Ariz. App. 520, 460 P.2d 191 (1969); *but cf.* Mather v. Caterpillar Tractor Corp., 23 Ariz. App. 409, 533 P.2d 717 (1975). *See supra* notes 8-15 and accompanying text for a discussion of the consumer expectation test.

26. 113 Ariz. at 267, 550 P.2d at 1068.

27. Although, citing Rogers v. Unimac Co., 115 Ariz. 304, 565 P.2d 181 (1977) and Amburgery v. Holan Division of Ohio Brass Co., 124 Ariz. 531, 606 P.2d 21 (1980), Henderson, *supra* note 12, at 266, points out that the supreme court "subsequently confirmed that the 'consumer expectation' test of Comment (i) is one test that will be recognized," ambiguity as to the parameters of the test remained after *Byrns*. Division Two of the Court of Appeals fairly consistently relied upon *Byrns* as a reassertion of the consumer expectation test, and by and large decided cases on that ground. Rhodes v. International Harvester, 131 Ariz. 418, 641 P.2d 906 (Ct. App. 1982); Ferguson v. Cessna, 132 Ariz. 47, 643 P.2d 1017 (Ct. App. 1981), Moorer v. Clayton, 128 Ariz. 565, 627 P.2d 716 (Ct. App. 1981). In Hohlenkamp v. Rheem Mfg. Co., 134 Ariz. 208, 655 P.2d 32 (Ct. App. 1982), the court said in dictum that where a consumer's expectation is not violated the case must proceed on negligence grounds, indicating that the consumer expectation test is the sole test for strict liability design defect. In its post-*Byrns* cases, Division One seemed confident that, although the Arizona Supreme Court had stated several possible tests for determining whether a product was 'unreasonably dangerous' for strict liability purposes in *Byrns*, it had intended to reaffirm its adherence to the RESTATEMENT'S consumer expectation test as the sole definition of design defect. Vineyard v. Empire Machinery Co., Inc., 119 Ariz. 502, 505, 581 P.2d 1152, 1155 (Ct. App. 1978). This view of *Byrns* paved the way for the decision one year later, in Brady v. Melody Homes, Inc., 121 Ariz. 253, 589 P.2d 896 (Ct. App. 1978), discussed *infra* notes 27-33 and accompanying text.

28. 121 Ariz. 253, 589 P.2d 896 (Ct. App. 1978). In *Brady*, the court found that a reasonable consumer would not have expected that a mobile home manufactured in 1964 would contain smoke detectors. *Id.* at 260, 589 P.2d at 903.

29. *Id.* at 259, 589 P.2d at 902.

30. *See supra* notes 18 and 19 and accompanying text.

31. *See supra* note 5 and accompanying text.

Byrns, defined 'unreasonably dangerous' by citing a varient of Wade's risk/benefit analysis, but stressed that the supreme court did not explicitly adopt that analysis.[32] Thus, the *Brady* court concluded that the supreme court had not intended to adopt the risk/utility analysis as an equally viable alternative to the consumer expectation test where the latter could not be applied.[33]

In *Dart*, the Arizona Supreme Court specifically disapproved the foregoing conclusion by the *Brady* court.[34] Instead, it definitively adopted an approach to design defect cases that will not only permit Arizona courts to continue to apply the traditional consumer expectation test, but also to apply the risk/utility balancing test in determining whether a manufacturer should be held strictly liable for an alleged design defect.

THE *DART V. WIEBE* DECISION

Donald Dart was injured while working with a paper shredder manufactured by the defendant, Wiebe Manufacturing, Inc.[35] Dart brought an action in separate counts of negligence and strict liability against the manufacturer.[36] Dart claimed the company was negligent in designing the machine without safety guards at the nip points and strictly liable for the defective and unreasonably dangerous design. The jury returned a verdict for the defendant. Dart appealed the decision on the ground that the trial court erred when it refused to give the jury separate negligence and strict liability instructions, and instead gave one "hybrid negligence instruction."[37]

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32. 121 Ariz. at 258, 589 P.2d at 901.

33. The *Brady* court also examined Barker v. Lull Engineering Co., 20 Cal.3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978), the major state supreme court decision that had explicitly adopted an alternative risk/utility test. It agreed with the *Barker* formulation of design defect cases as involving either a violation of a reasonable consumer's expectation or a weighing of the risks and benefits of the product design, but it disagreed sharply that the latter analysis could be conducted under a strict liability rubric.

In *Barker*, the California Supreme Court held that a product is defective in design if 1) the plaintiff proves that the product failed to perform as safely as an ordinary consumer would expect when used in an intended or reasonably foreseeable manner, or 2) the plaintiff proves that the product's design proximately caused the injury and the defendant fails to prove, in light of the relevant factors, that on balance the benefits of the challenged design outweigh the risk of danger inherent in such design, 20 Cal. 3d at 435, 573 P.2d at 455-56, 143 Cal. Rptr. at 237-38. The *Brady* court viewed this alternative as moving the test for design defect out of tort law and into a compensation system based on injury. 121 Ariz. at 259, 589 P.2d at 902. The *Dart* court, alternatively, cited approvingly to the *Barker* analysis. 147 Ariz. 242, 245, 709 P.2d 876, 879 (1985).

34. 147 Ariz. at 248, 709 P.2d at 882.

35. The facts of Dart v. Wiebe are set forth 147 Ariz. at 243, 709 P.2d at 877.

36. Dart originally filed a count for breach of warranty as well. The Maricopa County Superior Court directed a verdict for the defendant on that count; thus, it was not at issue in the appeal.

37. The relevant portions of the trial court instruction include:

> Plaintiff claims that defendant's product was defective and unreasonably dangerous in that it was negligently designed. Negligent design can be described as the manufacturer failing to do that which an ordinarily prudent manufacturer would do. . . . A manufacturer is negligent if he fails to act as an ordinarily careful manufacturer would act . . . thus, if better testing or design was available and would have eliminated an unreasonable danger the manufacturer is expected to have known and used that method as a matter of due care. Negligence, however, is not established with a simple showing that a better design could be built [but only] where a showing is made that the manufacturer was unreasonable in not adopting the better design.
>
> In determining whether or not the product was unreasonably dangerous, you may consider the following factors . . . [instruction ended with a list of eleven factors, including

The court of appeals affirmed[38] reasoning that Dart's claim that the product design was improper and that a safer design should have been adopted rested upon negligence principles, despite the appearance of strict liability language.[39] Thus, the hybrid negligence instruction was proper. The court also noted that a manufacturer could be held strictly liable when a product fails to perform as safely as an ordinary consumer would expect.[40]

The Arizona Supreme Court reversed. While it agreed that the consumer expectation test continues to be the core standard for strict liability claims, it held that when such a test cannot be applied to the facts, a plaintiff may proceed under a risk/utility test.[41] The court said that despite the focus upon the reasonableness of the manufacturer's conduct under a risk/utility analysis, the test is not one of negligence. The basis for this distinction is that knowledge about the dangerous condition of the product that has been revealed subsequent to its distribution is imputed to the manufacturer even if those dangers were not reasonably known at the time of manufacture or design.[42]

In *Dart*, the Arizona Supreme Court adopted a two-prong test for design defect cases. The court held that design defect cases should, if possible, be decided upon the consumer expectation test.[43] If, however, that test is inapplicable, the case should proceed under a risk/utility analysis.[44] Moreover, in framing the risk/benefit analysis, the court incorporated a hindsight approach. This approach imputes the knowledge of the 'danger in fact,' as revealed subsequent to distribution of the product to the manufacturer.[45]

The Two-Prong Test

In defining design defects, few courts, if any, have adopted an approach

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the seven Wade factors, *supra* note 17, taken from Byrns v. Riddell, 113 Ariz. 264, 550 P.2d 1065 (1976) and Brady v. Melody Homes Mfg., 121 Ariz. 253, 589 P.2d 896 (Ct. App. 1978)].

Dart, 147 Ariz. at 249, 709 P.2d at 883.

38. No. 1 CA-CIV 5793 (Ariz. Ct. App. October 18, 1984).

39. *Id.* at 6-7, as cited in *Dart*, 147 Ariz. at 249, 709 P.2d at 877.

40. The court relied upon its decision in Brady v. Melody Homes Mfg., 121 Ariz. 253, 589 P.2d 896 (Ct. App. 1978), in which it said that it would feel "relatively comfortable" applying strict liability to a manufacturer when the product falls below the reasonable expectations of the ordinary consumer. But where the court found as a matter of law that a reasonable consumer's expectations had not been violated, then the case should proceed as a traditional negligence case. *See supra* notes 7-14 and accompanying text for a discussion of the consumer expectation test, and *supra* notes 26-32 and accompanying text for a more detailed assessment of the import of the *Brady* decision.

41. 147 Ariz. at 248, 709 P.2d at 882. The court said:

> Such cases should, if possible, be decided upon the consumer expectation test. If that test is inapplicable because the ordinary consumer would not form an expectation with regard to the relevant safety feature, then the case must proceed under the risk/benefit factor analysis . . . [i]n close cases it may be necessary for the court to give both instructions. (citations omitted)

42. *Id.* *See* Henderson, *supra* note 12.

43. As discussed *supra* notes 13 and 14 and accompanying text, a number of situations exist where the consumer expectation test might not apply.

44. 147 Ariz. at 248, 709 P.2d at 882. The point of departure for the court's decision in *Dart* is its own analysis of its prior decision in *Byrns*. The court stated that in *Byrns*, it "expressly approved the risk/benefit analysis recommended by Dean Wade." *Dart*, 147 Ariz. at 245, 709 P.2d at 879. A close reading of *Byrns*, however, leaves some doubt as to the expressness with which the factor analysis was adopted, given the ambiguity of the language.

45. 147 Ariz. at 248, 709 P.2d at 882, citing PROSSER & KEETON, *supra* note 5, at 699.

that gives a court two alternative standards to apply.[46] Even those cases which have adopted a two-pronged approach differ from *Dart* in at least two ways. First, some courts have been more explicit in devising a test in which the consumer expectation standard and the risk/utility balancing approach are counterposed as true alternatives. In those cases, each test is equally applicable and available to the parties and to the court in rendering its decision.[47] Under *Dart*'s formulation of the two-prongs, much tighter restrictions have been placed on the use of each alternative. According to *Dart*, it appears that a case should proceed under a consumer expectation analysis *unless* it is shown to be inappropriate.[48]

Second, other courts have adopted the alternative, two-prong approach as a substitute for the 'unreasonably dangerous' requirement of the plaintiff's proof.[49] Prior to their adoption of the two-pronged approach for design defects, the California, Alaska, Hawaii, and New Jersey courts had abolished the *Restatement's* requirement that a product be 'unreasonably dangerous' because of its inherent ambiguity. As Wade points out, however, those courts subsequently realized that reliance upon the term 'defective' alone provided insufficient guidance.[50] Conversely, Arizona has retained the

46. The leading case which put forward a two-pronged test is Barker v. Lull Engineering Co., 20 Cal. 3d 414, 573 P.2d 443, 143 Cal. Rptr. 255 (1978), discussed *supra* note 33. Additional cases which might be cited include Caterpillar Tractor Co. v. Beck, 593 P.2d 871 (Alaska 1979); Ontai v. Straub Clinic & Hospital, 659 P.2d 734 (Hawaii 1983) (*but cf.*, Note, *Ontai v. Straub Clinic & Hospital: Who Carries the Burden of Proving Design Defects?*, 6 U. HAW. L. REV. 635 at 644 (1984) in which the author argues that although the *Ontai* court expressed its approval of the *Barker* tests for design defects, it did not distinctly apply either of them to reach its decision. As such, the scope to which Hawaii has adopted the two-pronged test is uncertain); Knitz v. Minster Machine Co., 69 Ohio St. 2d 460, 432 N.E.2d 814 (1982) (providing the plaintiff with two alternative methods of proving defect). The case which comes closest to *Dart* is Suter v. San Angelo Foundry & Machine Co., 81 N.J. 150, 406 A.2d 140 (1979) (the two tests are cumulative, so that a consumer expectation instruction must be given, but if consumer expectations are not involved, an instruction is given focusing on the reasonableness of the manufacturer's conduct).

The two cases cited by the *Barker* court as precedent for an analogous two-pronged approach, Henderson v. Ford Motor Co., 519 S.W.2d 87, 92 (Tex. 1974) and Welch v. Outboard Marine Corp., 481 F.2d 252, 254 (5th Cir. 1973), can not now lend support to a two pronged approach. The Texas Supreme Court in Turner v. General Motors Corp., 584 S.W.2d 844, 849 (Tex. 1979) specifically disapproved the previously employed bifurcated test of consumer expectations or prudent manufacturer, balancing test. *Welch* is inapposite because it discussed the use of the two tests not as providing tests in the alternative, but in essence as being the same test.

47. *See, e.g., Barker*, 20 Cal. 3d at 418, 573 P.2d at 446, 143 Cal. Rptr. at 228; *Knitz*, 69 Ohio St.2d at 446, 432 N.E.2d at 818.

48. The *Dart* opinion defines "inapplicable" as when the "ordinary consumer would not form an expectation with regard to *the relevant safety feature*," 147 Ariz. at 248, 709 P.2d at 882, (emphasis added). It is unclear whether this is intended to limit the *Dart* rationale to design defects that involve lack of a safety feature. At several other points in the opinion, the *Dart* court alternatively describes this inapplicability of the consumer expectation test—where the consumer expectation test "fails to provide a complete answer" or, "cannot be applied or is uncertain." 147 Ariz. at 246, 247, 709 P.2d at 880, 881. At no point, however, does the court conclusively state when the consumer expectation test will not apply. *See also supra* notes 13 and 14. In *Dart* itself, the trial court assumed that failure to provide safety guards was a matter beyond the ordinary consumer's expectation, and the issue of the applicability of the consumer expectation test was never raised on appeal. 147 Ariz. at 249, 709 P.2d at 883. Nor did Dart ever request a consumer expectation instruction. 147 Ariz. at 250, 709 P.2d at 884. It would seem, at a minimum, that the consumer expectation test will not be applicable in a case such as *Dart*, involving industrial employees who are required to work on the machine in order to make a living. *See also* Turner v. Machine Ice Co., 138 Ariz. 329, 674 P.2d 883 (Ct. App. 1983).

49. Wade, *supra* note 6, at 558.

50. *Id.*

'unreasonably dangerous' requirement, *and* added a two-pronged approach as well.

Dart's *Hindsight Test*

In distinguishing the risk/benefit analysis of the second prong of its new test from negligence, the court stated that in a negligence analysis, the focus of inquiry is on the conduct of the manufacturer whereas in strict liability it is on the quality of the product.[51] But, this statement has little meaning unless it embodies a distinction between the time frames within which the two inquiries are made.[52] To resolve this, the *Dart* court cited the test from *Dorsey v. Yoder* which it had previously quoted in *Byrns*: "whether a reasonable manufacturer would continue to market his product in the same condition as he sold it to the plaintiff *with knowledge of the potential dangerous consequences the trial just revealed*."[53]

The court further stated that the 'hindsight' test is generally recommended by the commentators and by precedent.[54] The authority used to support this proposition, however, is not clear-cut. For example, the first commentator cited by the court in favor of this proposition is Professor Keeton. In the article cited, however, Keeton takes a much more extreme position than those courts which simply impute the knowledge of the danger-in-fact of the product back to the manufacturer. Specifically, Keeton says that the best test is whether a reasonable person would conclude that the magnitude of the scientifically perceivable danger as it is proved to be at trial outweighed the benefits of the product.[55] Another interpretation of the hindsight test imputes to the manufacturer knowledge of all the flaws in the products that were scientifically knowable at the time of marketing.[56] More recently, Dean Wade has questioned the need to impute knowledge to the manufacturer at all, given the maturity of strict liability principles in most courts of this country.[57] The cases cited by the *Dart* court as precedent for the 'hindsight test' did not carefully examine these alternative formulations, nor do they necessarily represent a single, uniform version of the 'hindsight test.'[58]

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51. 147 Ariz. at 246, 709 P.2d at 880 (emphasis in the original).

52. *Id.* at 246-47, 709 P.2d at 880-81. For a detailed analysis of the time element in product liability cases, see Wade, *supra* note 12.

53. *Dart*, 147 Ariz. at 247, 709 P.2d at 881, quoting Dorsey v. Yoder, 331 F. Supp. 753, 759-60 (E.D. Pa. 1971), *aff'd*, 474 F.2d 1339 (3rd Cir. 1973) (emphasis supplied by the Court in *Dart*).

54. 147 Ariz. at 247, 709 P.2d at 881. *But cf.* PROSSER & KEETON, *supra* note 5, at 701 (discussing the "hindsight negligence test" as representing an extreme minority position).

55. Keeton, *Product Liability*, *supra* note 20, at 38.

56. Wade, *supra* note 12, at 763 (the article also suggests other possibilities for the hindsight timeframe).

57. *Id.* at 764.

58. 147 Ariz. at 247, 709 P.2d at 881 ("This 'hindsight' test is generally recommended by the commentators, and by precedent, if the case is to be pursued in strict liability," citing Caterpillar Tractor Co. v. Beck, 593 P.2d 871, 886 (Alaska 1979); Barker v. Lull Engineering Co., Inc., 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 255 (1978); and Phillips v. Kimwood Machine Co., 269 Or. 485, 525 P.2d 1033 (1974)). The *Barker* court gave no guidance for how to interpret what it actually meant by its reference to 'hindsight': "[A manufacturer will be held strictly liable] if, upon *hindsight*, the trier of fact concludes that the product's design is unsafe to consumers, users, or bystanders." 20 Cal. 3d at 434, 573 P.2d at 457, 143 Cal. Rptr. at 239 (emphasis added). The *Caterpillar* court cited the preceding *Barker* quote, but clearly specified that "design defects must be measured

Whether scientifically unknowable facts should be imputed to the manufacturer is a controversial issue.[59] Given *Dart*'s adoption of what appears to be the Keeton hindsight test, the court implies a willingness to impute previously unknowable dangers. The *Dart* facts did not require the court to reach this issue, however, since the danger the nip points posed to operators was obvious at the time of the accident.

DART'S IMPACT ON PRODUCT LIABILITY IN ARIZONA

While the Arizona Supreme Court discussed in some detail the rationale for its new dual standard for design defect cases, it has by no means dispositively addressed a number of critical issues that are likely to arise as the courts implement this fundamentally new approach. Two of these issues—the consumer expectation test under *Dart* and the potential impact on *Dart* of the Arizona Products Liability Statute—will be examined here because of their broad implications. Other issues, such as the allocation of the burden of proof under *Dart*,[60] the compatability of the comparative negligence statute with *Dart*,[61] and the incorporation of *Dart* into the Recommended Arizona Jury Instructions[62] are beyond the scope of this Note.

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by the knowledge and information which existed when the product left the hands of the manufacturer," 593 P.2d at 886 n.52. In *Phillips*, the court said that a manufacturer would be held strictly liable if he sold a product that a reasonable person would not put into the stream of commerce *"if he had knowledge of its harmful character."* 269 Or. at 492, 525 P.2d at 1036 (emphasis in original). The court recognized the conflict in the Wade and Keeton formulations (the former imputing only the knowledge existing at the time the product was sold and the latter imputing knowledge of dangers known at time of trial that may have been scientifically unknowable at the time of manufacture). The court appeared to adopt the Wade formulation. 269 Or. at 492 n.6, 525 P.2d at 1036 n.6. The court later stated that it was concerned with "the surrounding circumstances and knowledge *at the time the article was sold.*" 269 Or. at 494, 525 P.2d at 1037 (emphasis added).

None of these three cases, then, provides direct support for a hindsight test that would impute knowledge as it is known at the time of trial, the formulation upon which the *Dart* court relied. 147 Ariz. at 247, 709 P.2d at 881.

59. One of the very few cases adopting such an approach is Beshada v. Johns-Manville Prod. Corp., 90 N.J. 191, 447 A.2d 539 (1982) (disallowing a state-of-the-art defense in a case involving failure to properly warn the consumer, thus imputing unknowable knowledge to the manufacturer). *See also* Halphen v. Johns-Manville Sales Corp., 484 So. 2d 110 (La. 1986), discussed *supra* note 7, setting forth a new category of product ('unreasonably dangerous per se') for which liability may be imposed for scientifically unknowable dangers.

60. *Dart* itself does not deal directly with the burden issue. Most likely, the plaintiff will retain the burden of showing that the product was defective and unreasonably dangerous under either the consumer expectation or risk/utility test. But, the court's reliance upon the *Barker* analysis might imply an adoption of that court's shift of the burden to the defendant once the plaintiff establishes that an injury has occurred.

61. In 1984, Arizona adopted the Uniform Contribution Among Tortfeasors Act, ARIZ. REV. STAT. ANN. §§ 12-2501 to -2509 (Supp. 1986), which includes adoption of comparative negligence. Section 12-2509 permits a strict liability defendant to raise assumption of the risk as a defense, but not contributory negligence.

62. *Dart* rendered obsolete the current Revised Arizona Jury Instruction (R.A.J.I.) on Products Liability, Conditions for Liability—Defect. That instruction did not deal with a two-pronged approach to design defect, and it explicitly rejected the "unreasonably dangerous" language retained by *Dart*.

The State Bar Jury Instruction Committee has prepared revised instructions that incorporate the issues raised by the *Dart* decision. These new instructions were submitted to the Arizona State Bar Board of Governors and approved in September 1986. Correspondence from Maricopa County Superior Court Judge Noel Fidel, Chairman of the Jury Instruction Committee, April 17, 1986, and October 1, 1986.

The new instructions read as follows:

The Consumer Expectation Test Under Dart

The consumer expectation test, as described in the *Restatement's* § 402(A) comment (i), has been criticized as an inadequate measure of a defectively designed product's actionability.[63] Nonetheless, the Arizona Supreme Court did not eliminate nor narrow the test, but instead, breathed new life into it. It is now the test of first recourse and can be dispositive on the issue of whether a 'defective condition' is 'unreasonably dangerous.' Despite its faith in the test, the court did not choose to retain it as the sole avenue for plaintiff's recovery. As a result, questions arise with respect to how the two tests will work together in practice.

The court held that courts must apply the risk/utility test when the consumer expectation test cannot be used. Must, then, the plaintiff always proceed with a consumer expectation analysis first? The plaintiff was not so required in *Dart* itself. But language throughout the opinion suggests that the consumer expectation test is the threshold requirement that must always be established one way or the other, before the risk-utility test is employed.

The *Dart* court also stated, however, that the plaintiff did not foreclose his use of a strict liability theory by failing to request a consumer expectation instruction.[64] From that language, it appears the plaintiff would have control over whether to proceed under either the consumer expectation test, the risk-utility test, or both.

In *Boy v. I.T.T. Grinnel Corporation*,[65] though, the appellate court reviewed a strict liability jury instruction in light of *Dart*. It interpreted *Dart* as requiring that a court give either a consumer expectation instruction or a risk/utility instruction, depending upon whether the consumer expectation test was determined to be 'inappropriate.'[66] The court implied that the

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Product Liability 2

A product is defective and unreasonably dangerous if it fails to perform as safely as an ordinary consumer would expect when the product is used in a reasonably forseeable manner.

A product is defective and unreasonably dangerous if the harmful characteristics of its design outweigh the benefits of the design. You must determine whether a reasonable manufacturer or seller, with knowledge of the facts the trial has just revealed about the harmful characteristics of the product's design, would continue to market the product without changing the design. A manufacturer or seller is presumed to know these harmful characteristics, whether he actually knows them or not. Some factors which you may consider in weighing the harmful characteristics against the benefit of the design are . . . [the instruction then lists the seven Wade factors, *supra* note 16. The instruction cites RESTATEMENT 402(a), comment g; *Dart*; Byrns v. Riddell, 113 Ariz. 264, 550 P.2d 1065 (1976); and, Phillips v. Kimwood Machine Co., 269 Or. 485, 492 n.16, 525 P.2d 1033, 1040 n. 16 (1974) as authority.]

Use Notes

In a manufacturing defect case, use paragraph one alone. In a design defect case, use paragraph one or two or both as supported by the evidence. See *Dart*. Include or exclude the [factors] . . . depending upon the resolution of Issue 6 below [discussed *supra* note 17.]

63. *See supra* notes 11-13 and accompanying text for a discussion of problems with the consumer expectation test.

64. 147 Ariz. at 250, 709 P.2d at 884.

65. 150 Ariz. 526, 535, 724 P.2d 612, 621 (Ct. App. 1986). This decision is a supplemental opinion to Boy v. I.T.T. Grinnel Corp., 150 Ariz. 526, 724 P.2d 612 (Ct. App. 1985) and was filed subsequent to a review of appellee's motion for reconsideration, appellant's response thereto, and the supreme court's decision in *Dart*.

66. The court gave an example from *Dart* of when an instruction based upon the consumer

plaintiff did not have a choice of tests under which to proceed, but that the applicability or nonapplicability of the consumer expectation test must first be shown in design defect cases, and where inappropriate, a risk/utility instruction should be given.[67]

Another question is raised by *Dart* regarding the relationship between the consumer expectation test and open and obvious dangers. Standing alone, that test precludes recovery for harm caused by an open and obvious danger. A reasonable consumer in that situation could be expected to avoid such danger. If such a test had been applied to Donald Dart, for example, it is possible to conclude that since he knew the machine was dangerous, in precisely the manner in which it injured him, he should be precluded from recovery. In light of that possible conclusion in a situation in which an employee is required to use dangerous machinery, the consumer expectation test has led to dissatisfaction.[68] As an employee-plaintiff, Dart cannot be considered the best person upon whom to force the cost of injury resulting from this sort of open and obvious danger. Such a rule would undercut the effectiveness of strict liability policies.

Recognizing this limitation, the Arizona Supreme Court rejected the open and obvious danger rule in its decision in *Byrns*.[69] It is no coincidence that the court also, for the first time, discussed a risk-utility balancing test for determining design defect. The obviousness of the danger is merely one factor in a 'risk-utility' analysis, whereas it plays a decisive role in a 'consumer expectation' approach.[70] Given this recognition of the unfairness of this peculiar aspect of the consumer expectation test, and given the precise facts before the court in *Dart*, the court's decision to adopt a second prong to the test for design defect was a logical extension. Despite the logic, this adoption of a risk/utility test, with knowledge imputed to the manufacturer, and the abolition of the open and obvious danger rule, does not comport with the defense of assumption of the risk explicitly allowed by the Arizona Products Liability Statute.

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expectation test would be inappropriate—"when the consumer would not know what to expect from the product because he would have no idea how safe the product could be made." *Id.* at 536, 724 P.2d at 622, citing *Dart*, 147 Ariz. 244, 709 P.2d 878.

67. The *Boy* court, in its analysis of proper instructions, distinguished between manufacturing defect and design defect cases. It relied on *Dart*'s "strong indication" that where a manufacturing defect is alleged, a "consumer expectation" instruction should be given, and said that the question of manufacturing defect should not be framed by a risk/utility instruction. *Boy*, at 536, 724 P.2d at 622.

68. *See, e.g.*, Note, *Minnesota Replaces the Restatement Standard with a Negligence Standard in Design Defect Cases—Bilotta v. Kelly Co.*, 1985 WM. MITCHELL L. REV. 891, 904 n.72 (noting the similarity between the consumer expectation standards and the open and obvious defect rule, and calling into question the continued vitality of the former where the latter is abolished).

69. Byrns v. Riddell, Inc., 113 Ariz. 264, 267, 550 P.2d 1065, 1068 (1976) (expressly rejecting the patent defect rule put forth in Maas v. Dreher, 10 Ariz. App. 520, 460 P.2d 191 (1969)). Subsequent to *Byrns*, the lower courts recognized the abolition of the patent defect rule as paving the way for adoption of a risk/utility analysis of design defect, *see, e.g.*, Turner v. Machine Ice Co., 138 Ariz. 329, 333, 674 P.2d 883, 887 (Ct. App. 1983); Vineyard v. Empire Machinery Co., Inc., 119 Ariz. 502, 581 P.2d 1152, 1155 (Ct. App. 1978).

70. Henderson, *supra* note 12, at 267.

Dart *and the Arizona Products Liability Statute*

In *Dart*, the court did not reach any issue posed by the Arizona Products Liability Statute.[71] The plain language of two sections of that statute in particular raise the question whether *Dart* will retain its vitality in cases where the statute applies. Section 12-686 of the statute reflects a strong public policy in Arizona of not admitting evidence of a subsequent product design change as direct evidence of a defect in an action involving a product-related accident.[72]

The *Dart* court's adoption of a hindsight test, in which a defect is judged by imputing knowledge back to the manufacturer at the time of distribution, would appear to conflict with this legislative rule of evidence. In cases decided under the traditional consumer expectation test, the conflict will not arise. But, once the courts begin to balance the factors in a risk/utility analysis, the assessment of whether the manufacturer would have distributed the product, had he known of the danger as it is determined at trial, is the type of evidence that will be necessary to give meaning to the test. This may depend, however, upon the precise definition given to the hindsight test in subsequent cases. Henderson argues, for example, that although the statute prevents the plaintiff from introducing state of the art evidence, such evidence is defined as technological, mechanical or scientific knowledge that develops after the sale date, and *not* necessarily post-sale changes in knowledge about the likelihood of injury and its probable seriousness.[73]

It is even less certain whether *Dart* can coexist with the statutory affirmative defense of conformity with the state of the art at the time the product was first sold by the defendant.[74] Other states that apply some form of the risk/utility balancing test, but do not have an explicit statutory 'state-of-the-art' defense as is contained in the Arizona statute, have discussed state-of-the-art evidence as not constituting an absolute defense, but merely as evidence to go into the risk/utility analysis.[75] Such an approach would not be permissible under Arizona's statute.

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71. ARIZ. REV. STAT. ANN. §§ 12-681 to -686 (1982).

72. ARIZ. REV. STAT. ANN. § 12-686 says, "In any product liability action, the following shall not be admissible as direct evidence of a defect: 1. Evidence of advancements or changes in the state of the art subsequent to the time the product was first sold by the defendant." In 1983, Dean Wade concluded that "use of the hindsight standard effectively nullifies the strong policy of many states" against admitting evidence of product design changes after an injury, and he proceeded to cite Arizona's statute, specifically § 12-686, as an example of that strong policy. Wade, *supra* note 12, at 755.

73. Henderson, *supra* note 12, at 268.

74. ARIZ. REV. STAT. ANN. § 12-683(1) (1982) reads,

> In any product liability action, a defendant shall not be liable if the defendant proves that any of the following apply: 1. The defect in the product is alleged to result from inadequate design or fabrication, and if the plans or designs for the product or the methods and techniques of manufacturing, inspecting, testing and labeling the product conformed with the state of the art at the time the product was first sold by the defendant.

If the hindsight test adopted by *Dart* is found to impute knowledge to the manufacturer of scientifically unknowable dangers, then a state-of-the-art defense is not viable. *See, e.g.*, Halphen v. Johns-Manville Sales Corp., Inc., 484 So. 2d 110 (La. 1986), discussed *supra* notes 7 and 56, for disallowance of state-of-the-art defense in just such a situation.

75. *See, e.g.*, Caterpillar Tractor Co. v. Beck, 593 P.2d 871 (Alaska 1979); O'Brien v. Muskin Corp., 463 A.2d 298 (N.J. 1983); *see also* Note, *State-of-the-art evidence relevant to risk-utility analysis in design defect cases, O'Brien v. Muskin*, 15 SETON HALL L. REV. 120 (1984).

These conflicts between the Products Liability Statute and *Dart* will be resolved by subsequent case law. In *State ex. rel. Collins v. Seidel*[76] the supreme court said that it would recognize statutory arrangements which seem reasonable and workable and which supplement the rules promulgated by the court. When a conflict arose, however, a statutory rule could not engulf a general rule of evidence. Similarly, in *Kenyon v. Hammer*,[77] in the context of a statute of limitations question in a medical malpractice action, the court painstakingly reviewed the legislative power to define and regulate tort theory and found it subservient to the Arizona Constitution's provision that "the right of action to recover damages for injuries shall never be abrogated."[78] Although it is unlikely that the supreme court's reasoning and analysis of design defect cases in *Dart* will be denied its full effect in future strict liability design defect cases, the courts will nonetheless have to deal with *Dart*'s conflict with the plain language of the Products Liability Statute.

CONCLUSION

In *Dart*, the Arizona Supreme Court adopted a two-prong approach to product liability claims involving design defects, clarifying prior, inconsistent Arizona law, but departing from design defect law in most other jurisdictions. Under this approach, a claim should, where possible, be decided under the traditional consumer expectation test. If, however, such a test is inappropriate, then the claim may be decided under a risk/utility balancing test that differs from a negligence test in that the knowledge of the danger as it is now known is imputed to the manufacturer.

Despite the court's clear statement of the test to be applied in determining whether a design defect is actionable, several issues remain unresolved by the decision. First, with regard to its application, the courts will need to determine which interpretation of the hindsight test is applicable under the *Dart* analysis. Second, with respect to its ramifications, the courts will confront the issues of the meaning of the consumer expectation test under *Dart*, and the potential conflict between *Dart*'s hindsight test and the Arizona Products Liability Statute. Given these remaining issues, the Arizona Supreme Court may not yet have achieved the absolute clarity in Arizona products liability law it sought through its analysis in *Dart*.

76. 142 Ariz. 587, 691 P.2d 678 (1984). In *Collins*, the supreme court faced a conflict between its own evidentiary rules governing admissibility of a breathalyzer test and an alternative rule set forth in ARIZ. REV. STAT. ANN. § 28-692.03 (1982).

77. 142 Ariz. 69, 688 P.2d 961 (1984) (statute abolishing the discovery rule in medical malpractice claims was held unconstitutional).

78. ARIZ. CONST. art. XVIII § 6.