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ESSAY

AN ESSAY ON THE QUIETING OF PRODUCTS LIABILITY LAW

Aaron D. Twerski†

For several decades, courts and commentators have disagreed as to whether the standard for liability in product design defect cases should be based on risk-utility tradeoffs or disappointed consumer expectations. Although a strong majority opt for risk-utility a significant minority of courts adopt the consumer expectations test. This Essay contends that as a practical matter in jurisdictions that allow for recovery in design defect cases on a consumer expectations theory, plaintiffs introduce a reasonable alternative design as the predicate for recovery. In fifteen of the seventeen states that allow recovery based on consumer expectations the author could not find a single case in which the plaintiff did not introduce a reasonable alternative design. And in all jurisdictions but one, a defendant is free to introduce risk-utility evidence as relevant to the issue of whether the product disappoints consumer expectations. Thus, whether a reasonable alternative design is required de jure, it is de facto a staple in almost all design defect cases.

INTRODUCTION

Almost six decades have passed since the onset of the modern products liability era.¹ The tumult that followed the adoption by the American Law Institute of strict liability in

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¹ The case that abolished the requirement of privity for strict liability against a manufacturer, *Henningsen v. Bloomfield Motors, Inc.*, 161 A.2d 69 (N.J. 1960), written in the same year as William L. Prosser's classic article, *The Assault Upon the Citadel (Strict Liability to the Consumer)*, 69 YALE L.J. 1099 (1960), ushered in the new era of products liability. Restatement (Second) of Torts § 402A was adopted by the American Law Institute in 1963 and quickly was adopted by almost all jurisdictions.

Section 402A is long behind us.² The rules governing such issues as crashworthiness,³ liability for products with patent dangers,⁴ comparative fault,⁵ and responsibility of component part manufacturers have been settled.⁶ Much of the hullabaloo surrounding the Products Liability Restatement in 1998 has faded into the past. The torrent of scholarly literature dealing with products liability has been reduced to a trickle.⁷ But one area of the law still seems to attract the interest of the courts: the controversy as to whether liability for defective product design should be governed by risk-utility balancing or the consumer expectation test. In the past several years courts in

² RESTATEMENT (SECOND) OF TORTS § 402A (AM. LAW INST. 1965).

³ In the early years following the adoption of Section 402A, there was controversy as to whether an automobile manufacturer had a duty to design a car so as to minimize damages to a passenger in case of an accident. *See Evans v. General Motors, Corp.*, 359 F.2d 822, 825 (7th Cir. 1986) (applying Indiana law and denying liability for crashworthiness), *cert. denied*, 385 U.S. 836, 836 (1966), *overruled by Huff v. White Motor Corp.*, 565 F.2d 104, 109 (7th Cir. 1977); *Larsen v. General Motors, Corp.*, 391 F.2d 495, 502 (8th Cir. 1968) (applying Minnesota law and recognizing a cause of action for crashworthiness). The action for crashworthiness is now universally accepted. RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 16(a) (AM. LAW INST. 1998) [hereinafter PRODS. LIAB. RESTATEMENT]. *See* DAVID G. OWEN, PRODUCTS LIABILITY LAW § 17.3, at 1065 (3d ed. 2015) (“ . . . [I]t seems safe to say that the crashworthiness doctrine is now the law in every American jurisdiction.”).

⁴ The “patent danger rule” immunized manufacturers from design liability when the product’s danger was open and obvious. *See, e.g., Campo v. Scofield*, 95 N.E.2d 802, 804 (N.Y. 1950) (concluding that the defendants are not liable for the plaintiff’s injury because the danger of the machine manufactured by defendants is open and obvious), *overruled by Micallef v. Miehle Co.*, Div. of Miehle-Goss Dexter, 348 N.E.2d 571, 573 (N.Y. 1976). The Products Liability Restatement § 2, Comments d and g reject the patent danger rule as an absolute defense in design defect cases; obviousness of danger is one factor in deciding whether a product should have been made safer. *See* OWEN, *supra* note 3, § 10.2, at 610 (virtually all American jurisdictions today, while refusing to apply a patent danger rule to design defect cases, boldly and properly apply it to “warning claims”) and cases cited in PRODS. LIAB. RESTATEMENT § 2, Reporter’s Notes at p. 85.

⁵ PRODS. LIAB. RESTATEMENT § 17(a), § 1 cmt. b; *see also Webb v. Navistar Int’l Transp. Corp.*, 692 A.2d 343, 346–350 (Vt. 1996) (discussing the policy reasons to apply comparative fault to products liability cases).

⁶ PRODS. LIAB. RESTATEMENT § 5; *see also Zaza v. Marquess & Nell, Inc.*, 675 A.2d 620, 629 (N.J. 1996) (discussing the majority rule that component part manufacturers are generally immune from liability when their non-defective parts are integrated into a larger product).

⁷ For the years 1963–1968, the Index to Legal Periodicals showed 1,602 articles under the category of Products Liability. In the years 2012–2018, there were only 272 academic journal articles under this category.

Pennsylvania,⁸ Connecticut,⁹ Nevada,¹⁰ and Florida¹¹ have written lengthy opinions on the issue. The question as to whether to make out a credible design claim the plaintiff must prove a reasonable alternative design (RAD) lies at the heart of the debate.¹²

In Part I, this Essay will very briefly review the origins of the controversy. Part II will argue that the controversy has been basically settled by the litigants who almost invariably fashion design litigation with regard to the viability of a RAD. Courts may not require a RAD but one has to look long and hard to find cases where a RAD has not been introduced. Jury instructions may talk consumer expectations, but the focus of the case is RAD. Part III will explain why plaintiffs opt to introduce evidence of a RAD in consumer expectations states. Part IV will survey the seventeen states that allow the recovery based on the consumer expectation test and show that in fifteen of the seventeen there are no design cases where a RAD was not introduced.¹³ Part V will discuss the two consumer

⁸ *Tincher v. Omega Flex, Inc.*, 104 A.3d 328, 368 (Pa. 2016), *vacated and remanded for new trial sub nom.*, 180 A.3d 386 (Pa. Super. Ct. 2018). For a more extensive analysis of *Tincher*, see *infra* note 62.

⁹ *Bifolck v. Philip Morris, Inc.*, 152 A.3d 1183, 1203 (Conn. 2016). For a more extensive analysis of *Bifolck*, see *infra* note 59.

¹⁰ *Ford Motor Co. v. Trejo*, 402 P.3d 649, 654–58 (Nev. 2017). For a more extensive analysis of *Trejo*, see *infra* note 55.

¹¹ *Aubin v. Union Carbide Corp.*, 177 So. 3d 489, 510–12 (Fla. 2015).

¹² See, e.g., *id.* at 505 (stating the critical difference between Second Restatement and the Third Restatement is the requirement that the plaintiff demonstrates the existence of a “reasonable alternative design”); *Tincher*, 104 A.3d at 395 (“[A] product may be in a defective condition unreasonably dangerous to the user even though no feasible alternative design is available.”) (citation omitted).

¹³ Four states who by statute have adopted the consumer expectation test either by statute or judicial decision are, in reality, risk-utility states. Arkansas, Indiana, and Utah are prime examples. For a comprehensive discussion of the law in these states, see Aaron D. Twerski & James A. Henderson, Jr., *Manufacturers’ Liability for Defective Product Designs: The Triumph of Risk-Utility*, 74 BROOK. L. REV. 1061, at 1081 n.99, 1089 n.113, 1091 nn.122–25 (2009) [hereinafter, Twerski & Henderson, Jr., *The Triumph of Risk-Utility*] (outlining the laws in Indiana, Arkansas, and Utah). In *Evans v. Nacco Materials Handling Grp., Inc.*, 810 S.E.2d 462, 470 (Va. 2018), the court said that liability for defective design could be established by showing that the product did not meet what reasonable consumers consider defective. But the court said:

Thus, while the jury could have concluded from the evidence that the plaintiff’s proposed redesign would eliminate, or at least reduce, the likelihood that the type of accident at issue in this case would occur, there was no evidence from which the jury could conclude that the plaintiff’s proposed redesign is safer overall. . . . It may also be true, however, that operators and bystanders would

expectation states in which there were design cases and no RAD was introduced. It will also critique the view of one of the states that will not allow risk-utility into evidence as relevant to whether a product meets consumer expectations. However, the main focus of this Essay is to tell the story as to how products liability law has become non-controversial. It has settled down because plaintiffs have decided for good and sufficient reason to try design cases on the premise that the availability of a RAD is crucial to a credible case.

I

THE ORIGINS OF THE CONSUMER EXPECTATION TEST

The consumer expectation test had its origins in two comments to Section 402A that provide for liability to accrue: a product must be in a defective condition unreasonably dangerous to the user or consumer. Comment *g* defines “defective condition”:

The rule stated in this Section applies only where the product is, at the time it leaves the seller’s hands, in a condition not contemplated by the ultimate consumer, which will be unreasonably dangerous to him.

Comment *i* defines “unreasonably dangerous”:

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.

The leading scholars writing on or about the time that Section 402A was adopted did not envisage these comments as relevant to design defect. Dean William Prosser writing in 1971 said:

There are . . . two particular areas in which the liability of the manufacturer, even though it may occasionally be called strict, appears to rest primarily upon a departure from proper standards of care, so that the tort is essentially a

face a *greater* risk of injury under the plaintiff’s redesign than exists under the current design. *Thus, even if [the] plaintiff had proved that reasonable consumers expected a design that limits brake adjustment to a mechanic, or that makes it more difficult to adjust the brake by requiring the use of tools, there was no evidentiary basis for a jury to conclude that [the] plaintiff’s proposed redesign was safer overall.*

Id. at 472 (second emphasis added).

matter of negligence.¹⁴

Prosser then goes on at length to describe design defect and failure to warn as based in negligence.¹⁵ Over the next decade this theme was echoed by such scholars as Dean Page Keeton,¹⁶ Professors Gary Schwartz,¹⁷ John Wade,¹⁸ Mary J. Davis,¹⁹ Sheila Birnbaum,²⁰ and William C. Powers.²¹ As late as 1984, the Prosser and Keeton Hornbook on the Law of Torts made it clear that the consumer expectation test was inappropriate as a test for design defect.²² To be sure, there were dissenters²³ but the consensus was that the consumer expectation test would fade into oblivion.²⁴

It did not happen. A cadre of courts insisted that they wanted to retain the consumer expectation test since, unlike a risk-utility test, which smacked of negligence, it was a true strict liability test. The critics notwithstanding, the consumer expectation test continues to live on in about seventeen

¹⁴ WILLIAM L. PROSSER, LAW OF TORTS § 96, at 644 (4th ed. 1971) (footnote omitted).

¹⁵ *Id.* at 645–48.

¹⁶ W. Page Keeton, *Products Liability—Design Hazards and the Meaning of Defect*, 10 CUMB. L. REV. 293, 310 (1979).

¹⁷ Gary T. Schwartz, *Foreword: Understanding Products Liability*, 67 CALIF. L. REV. 435, 476, n.241 (1979).

¹⁸ John W. Wade, *On Product “Design Defects” and their Actionability*, 33 VAND. L. REV. 551, 566–67 (1980).

¹⁹ Mary J. Davis, *Design Defect Liability: In Search of a Standard of Responsibility*, 39 WAYNE L. REV. 1217, 1236–37 (1993).

²⁰ Sheila L. Birnbaum, *Unmasking the Test for Design Defect: From Negligence [to Warranty] to Strict Liability to Negligence*, 33 VAND. L. REV. 593, 613–14 (1980).

²¹ William Powers, Jr., *A Modest Proposal to Abandon Strict Products Liability*, 1991 U. ILL. L. REV. 639, 665–68 (1991).

²² PROSSER & KEETON ON TORTS § 99, at 698–99 (W. Page Keeton, et al., 5th ed. 1984). *But see* Michael D. Green, *The Unappreciated Congruity of the Second and Third Torts Restatements on Design Defects*, 74 BROOK. L. REV. 807, 837 (2009). Professor Green argues that both the Second and Third Restatements recognize a strict liability consumer expectation test for products that do not meet minimum standards of safety. Sec. 3 of the Products Liability Restatement embodies that principle. This author is in agreement. *See infra* note 30. In short, when a product fails to perform its manifestly intended function it does not matter whether the failure results from a manufacturing defect or a design defect. Risk-utility and RAD are important when the claim is that a product should have been designed with greater safety.

²³ *See, e.g.*, Marshall S. Shapo, *In Search of the Law of Products Liability: The ALI Restatement Project*, 48 VAND. L. REV. 631, 644 (1995) (explaining the importance of consumer expectations to design defect claims and arguing that courts should at least consider these expectations alongside risk-utility).

²⁴ OWEN, *supra* note 3, § 8.4, at 490–91.

jurisdictions.²⁵ In a few states it is the only test for defect;²⁶ in a greater number it is an alternate test for defect, i.e., risk-utility or consumer expectation.²⁷ The cases agree, in principle, that the consumer expectation test is limited to “cases in which the *everyday experience* of the product’s users permits a conclusion that the product’s design violated *minimum* safety assumptions”²⁸

II

IF NOT DE JURE—RAD IS DE FACTO NECESSARY TO MAKE OUT A CREDIBLE DESIGN CLAIM

It is not the intent of this Essay to rehash the debate about risk-utility versus consumer expectations. My longtime collaborator and co-reporter of the Products Liability Restatement, Professor James A. Henderson, Jr. and this author have written at length on this issue.²⁹ Our position is that to make out a classic design defect case, a plaintiff must prove that a RAD was available at the time of sale.³⁰ The

²⁵ See *infra* notes 44–48, 51–58 (providing examples of jurisdictions that continue to apply the consumer expectation test).

²⁶ These include Kansas, Nebraska, Oklahoma, Maryland, and Nevada. See *infra* notes 51–55.

²⁷ These include Alaska, Arizona, California, Connecticut, Florida, Hawaii, Illinois, Pennsylvania, New York, Oregon, Tennessee, and Washington. See *infra* notes 57–67.

²⁸ Soule v. Gen. Motors Corp., 882 P.2d 298, 308 (Cal. 1994).

²⁹ See, e.g., Aaron D. Twerski, *From Risk-Utility to Consumer Expectations: Enhancing the Role of Judicial Screening in Product Liability Litigation*, 11 HOFSTRA L. REV. 861, 892–935 (1983) (arguing that a consumer expectation test for design defect, if limited to the failure of the product for core uses, is similar to *res ipsa* and provides a legitimate ground for recovery); James A. Henderson, Jr. & Aaron D. Twerski, *A Proposed Revision of Section 402A of the Restatement (Second) of Torts*, 77 CORNELL L. REV. 1512, 1514 (1992) (proposing revisions to section 402A of the *Restatement (Second) of Torts* that prefer risk-utility calculus in design defect claims); James A. Henderson, Jr. & Aaron D. Twerski, *Achieving Consensus on Defective Product Design*, 83 CORNELL L. REV. 867, 879–87 (1998) (discussing the shortcomings of the consumer expectation test, and asserting that the risk-utility standard, when accompanied by a reasonable alternative design, is the superior standard); Twerski & Henderson, Jr., *The Triumph of Risk-Utility*, *supra* note 13, at 1106–08 (asserting that the risk-utility test continues to be superior to the consumer expectation test in all but *res ipsa* disputes). The Products Liability Restatement reflects the views of both Professor Henderson and this author inasmuch as we served as co-reporters on this project.

³⁰ See *supra* note 29. We have throughout noted that a RAD is not required in *res ipsa* like cases. See Products Liability Restatement § 3 that allows an inference of defect “without proof of a specific defect, when the incident that harmed the plaintiff . . . was of a kind that ordinarily occurs as a result of product defect[. . .]” (emphasis added). Although this inference of defect is most frequently applied in manufacturing defect cases, § 3 cmt. *b* provides that

inquiry of this Essay is whether evidence of a RAD is routinely offered by plaintiffs in states that allow a plaintiff to proceed under the consumer expectation test. With very few exceptions, the author found that—regardless of the theory that a state follows—the plaintiff almost invariably introduces a RAD into evidence.³¹ It is rare to find a design case where the plaintiff did not do so. There are a few isolated examples, but the issue of whether a plaintiff must introduce a RAD is almost beside the point. If a RAD is not required *de jure*, it is *de facto* a staple in almost all design cases.

To arrive at this conclusion, the author searched all state cases reported under the West Key Number collecting reported product liability design defect cases.³² The search did not include federal diversity cases. In our 2009 article surveying the states that had required a RAD, we counted twenty five states that had adopted RAD as mandatory to establishing a *prima facie* design defect case.³³ They were obviously not the focus of this inquiry. Instead, the author identified states that either had committed to the consumer expectation test as the exclusive test for design defect or had adopted the two-prong test. Since a plaintiff had the option of proceeding under the consumer expectation test, it was of interest to see whether the plaintiff sought to introduce evidence of a RAD and whether courts allowed the factfinder to consider this evidence.

The author makes no claim to have reviewed every state design case. To limit the inquiry the search depended on the

“occasionally a product design causes the product to malfunction in a manner identical to that which would ordinarily be caused by a manufacturing defect.” The comment goes on to limit liability to situations in which a product fails to perform its manifestly intended function. *See, e.g., id.* at illus. 1–4 (providing hypotheticals that demonstrate situations in which products failed to perform their manifestly intended function, versus situations in which they did not). Courts that have adopted the consumer expectations test have also realized the necessity of placing sensible limits on its applicability. *See Soule*, 882 P.2d at 308–10 (holding that the consumer expectation test must not allow a jury to ignore risk-utility analysis, nor may it result in a verdict that is unsupported as a matter of law); *Denny v. Ford Motor Co.*, 662 N.E.2d 730, 743–44 (N.Y. 1995) (discussing the utility of the consumer expectation test in considering RAD, but noting a preference for risk-utility).

³¹ *See infra* Part IV.

³² The West Key Number is 313A k126.

³³ Twerski & Henderson, Jr., *The Triumph of Risk-Utility*, *supra* note 13, at 1080. Wisconsin, originally classified as a consumer expectations state, has now adopted a RAD test for design conflict cases as set forth in Products Liability Restatement § 2(b). *See infra* note 56 (detailing Wisconsin’s adoption of a RAD requirement).

West classification in its key numbers. And, as noted earlier, federal diversity cases were not analyzed. Nor did the author provide elaborate citation to the cases in which the plaintiffs introduced a RAD. Having identified the states covered in this research, the notes in the margin will simply state that having read the cases in consumer expectation states none were found that in which a RAD was not introduced. The author invites any reader to check the research and confirm the veracity of my claim. One important caveat must be noted: in cases where defect is derived from the application of *res ipsa*, a RAD is not presented. Almost always these are manufacturing defect cases for which no RAD need be established.³⁴ Occasionally, design language appears in the case and the West Key Numbers may have included such a case. Cases alleging defect in drug design cases are also omitted. These are not classic design cases and are irrelevant to this survey.³⁵

III

WHY IS EVIDENCE OF RAD ALMOST ALWAYS INTRODUCED IN CONSUMER EXPECTATION STATES

Why would a plaintiff, in states that provide the option of proving a design defect by alleging a plaintiff friendly consumer expectation test, take the trouble to engage expensive experts to demonstrate to the jury that an alternative design would have been safer? Four significant reasons support the ubiquitous presence of a RAD in design litigation:

- (1) The consumer expectation test is vague and non-specific. A RAD points to a specific element of the design and seeks to convince the jury that had

³⁴ See, e.g., *J.M.F. Trucking, Inc. v. Carburetor & Elec. of Lewiston, Inc.*, 748 P.2d 381, 390–91 (Idaho 1987) (requiring no RAD where a truck engine caught fire and the plaintiff relied on a *res ipsa* theory of recovery); *Pagnotta v. Beall Trailers of Oregon, Inc.*, 991 P.2d 728, 732–33 (Wash. Ct. App. 2000) (requiring no RAD where a truck trailer detached from a truck and the plaintiff relied on a consumer expectation/*res ipsa* theory of recovery).

³⁵ The standard for liability in drug design cases has been the subject of great controversy. Courts have articulated eight different tests for drug design liability. See James A. Henderson, Jr. & Aaron D. Twerski, *Drug Design Liability: Farewell to Comment k*, 67 BAYLOR L. REV. 521, 542–43 (2015). Furthermore, there is almost unanimous agreement that courts are institutionally incapable of administering a RAD test for drugs. *Id.* at 544–48; see also *Lance v. Wyeth*, 85 A.3d 434, 443 (Pa. 2014) (echoing the sentiment that the proposition of a RAD is not feasible in drug cases). For an article suggesting that drug design claims are now subject to federal preemption, see Aaron D. Twerski, *The Demise of Drug Design Litigation: Death by Federal Preemption*, 68 AM. U. L. REV. 281, 303–04 (2018).

that feature been incorporated into the design of the product the plaintiff would not have, for example, suffered the loss of a hand or would not be a quadriplegic. This is a far more compelling story than “my expectations of product performance were disappointed.” The consumer expectation test is bland; the availability of a RAD is vibrant.

- (2) RAD being a negligence concept points the finger at the defendant and says that for a minimum outlay of funds the defendant could have saved the client from serious injury. In most jurisdictions, recovery for pain and suffering is open-ended.³⁶ The greater the fault the greater the likelihood the jury will impose significant damages.³⁷ The consumer expectations test is fault neutral. It speaks not to the defendant’s conduct or product but to the plaintiff’s expectations.
- (3) In preparing for trial, plaintiff’s counsel cannot be sure that the product design is so clearly defective that it fails to meet a consumer’s minimum expectations as to safety. Plaintiffs must be prepared for the very real possibility that a court will deny them a “consumer expectations” instruction after the completion of the case.³⁸
- (4) As courts have noted, consumers have a right to

³⁶ See DAN B. DOBBS, PAUL T. HAYDEN & ELLEN M. BUBLICK, *HORNBOOK ON TORTS* 855 (2d ed. 2015) (explaining that “[a]wards for pain are not easy to evaluate because there is no objective criterion for judgment”).

³⁷ See Richard L. Cupp, Jr. & Danielle Polage, *The Rhetoric of Strict Products Liability Versus Negligence: An Empirical Analysis*, 77 N.Y.U. L. REV. 874, 874 (2002). The authors conclude that use of negligence terminology rather than strict liability was more likely to result in jurors’ willingness to award any damages; when awards of damages were made, they were greater when negligence was the theory presented to them. Thus, a negligence instruction may improve the plaintiff’s chances both in terms of imposing liability and receiving a higher damages award. See also Paul D. Rheingold, *The Expanding Liability of the Product Supplier: A Primer*, 2 HOFSTRA L. REV. 521, 531 (1974), which notes that “[m]ore plaintiffs would prefer to present their respective cases to a jury on a negligence, rather than a strict liability, basis. In McLuenesque terms negligence is ‘hot’ and strict liability is ‘cold.’ It is easier to prevail by showing that the defendant did something wrong than that there is something technically defective about the product.”

³⁸ See, e.g., *Soule v. Gen. Motors Corp.*, 882 P.2d 298, 310 (Cal. 1994) (reasoning that in some cases the consumer expectation test was unworkable as a stand-alone theory of liability); *Lamke v. Futorian Corp.*, 709 P.2d 684, 686 (Okla. 1985) (holding that the plaintiff failed to demonstrate a sufficiently defective design such that a reasonable consumer would expect alternative outcomes).

expect well-designed products.³⁹ Thus the availability of a RAD gives support to the claim that the product disappoints legitimate expectations of the consumer. This argument appears to be duplicitous since the test for whether a RAD should have been adopted is viewed from the perspective of the hypothetical reasonable person not the reasonable manufacturer. Nonetheless, the desire to assure that juries keep the perspective of the reasonable consumer in mind in deciding whether a RAD should have been adopted is not without merit.⁴⁰

Given the ubiquitous presence of RAD evidence in design defect cases in almost all jurisdictions regardless of whether they require a RAD or not, the question arises as to whether the role of RAD is discussed in jury instructions. In consumer expectation states, are jurors told about RAD or risk-utility balancing? Defendants regularly ask for instructions that focus the jury on risk-utility, and in “consumer expectation” states they are denied.⁴¹ How significant is the lack of instruction on risk-utility? It is the author’s surmise that lack of instruction to the jury is of, some, but not monumental significance. Once the plaintiff has introduced a RAD into evidence based on the plaintiff’s expert’s testimony as to its practical feasibility and the defendant has countered with its experts, the jury’s attention is directed to whether the product under scrutiny was reasonably safe. It is the proverbial “elephant in the room.” An interesting example of this phenomenon arose in *Soule v. General Motors Corp.*⁴² In that

³⁹ See, e.g., *Aubin v. Union Carbide Corp.*, 177 So.3d 489, 511 (Fla. 2015) (emphasizing the manufacturer’s power to direct consumer expectation through product portrayal and advertising, and reasoning that this power may justify a greater duty to meet consumer expectations); *Heaton v. Ford Motor Co.*, 435 P.2d 806, 808 (Or. 1967) (en banc) (citing RESTATEMENT (SECOND) OF TORTS §§ 395 cmt. f, 402A) (“The user has the right to expect a reasonably safe design and reasonable quality controls in fabrication according to that design.”); *Tincher v. Omega Flex, Inc.*, 104 A.3d 328, 402–03 (Pa. 2016) (noting that consumers have a right to expect products that are safe for normal use); *Hamilton v. Motor Coach Indus., Inc.*, 569 S.W.2d 571, 577 (Tex. Civ. App. 1978) (“The consumer has a right to expect that he will receive from the manufacturer a product that is safe.”).

⁴⁰ OWEN, *supra* note 3, at 512; *Seattle-First Nat’l Bank v. Tabert*, 542 P.2d 774, 774–79 (Wash. 1975).

⁴¹ See, e.g., *Lester v. Magic Chef, Inc.*, 641 P.2d 353, 361 (Kan. 1982) (denying the plaintiff’s request for a risk-utility jury instruction in Kansas); *Ford Motor Co. v. Trejo*, 402 P.3d 649, 652 (Nev. 2017) (denying the plaintiff’s request for risk-utility jury instruction in Nevada).

⁴² See *Soule*, 882 P.2d at 298.

case, the plaintiff suffered serious injury to her ankle when her GM Camaro was struck by another car at closing speed on impact from 30 to 70 miles per hour.⁴³ The plaintiff alleged defective design of the toe pan as the cause of her injuries and introduced expert testimony in support of her claim. GM's experts disputed the claim of design defect.⁴⁴ The trial judge gave a consumer expectations instruction.⁴⁵ The jury awarded \$1.65 million in damages.⁴⁶ On appeal the California Supreme Court held that it was error to give a consumer expectations instruction because "[a]n ordinary consumer of automobiles cannot reasonably expect that a car's frame, suspension, or interior will be designed to remain intact in any and all accidents."⁴⁷ Nonetheless, the court found that it was harmless error to give the consumer expectation instruction because almost all the evidence focused on the differing expert evaluations of "the strengths, shortcomings, risks, and benefits of the challenged design, as compared with a competitor's approach."⁴⁸

Furthermore, the defendant is free to argue the safety or lack thereof of the alternative design. If the RAD is admitted into evidence, the defendant must be free to challenge the RAD and to argue that the challenged design is safer than the alternative or that it would not be economically feasible to adopt it.⁴⁹ Thus, the argument noted earlier that consumers expect well-designed products makes comment by counsel relevant even in a consumer expectation state. Very simply, once risk-utility considerations are admitted into evidence the likelihood that a consumer expectation instruction will have a significant impact on the result is, in the author's opinion, not great. To be sure, when plaintiffs are denied the consumer expectations instruction they seek reversal.⁵⁰ The consumer expectations instruction frees the plaintiff from bearing the burden of proof on the risk-utility issue and is thus more

⁴³ *Id.* at 301.

⁴⁴ *Id.* at 302.

⁴⁵ *Id.* at 303.

⁴⁶ *Id.*

⁴⁷ *Id.* at 310.

⁴⁸ *Id.* at 311.

⁴⁹ *See* *Aubin v. Union Carbide Corp.*, 177 So. 3d 489, 511 (Fla. 2015).

⁵⁰ *See, e.g., McCabe v. Am. Honda Motor Co.*, 123 Cal. Rptr. 2d 303, 308–09 (Cal. Ct. App. 2002) (appealing the trial court's ruling that the customer expectation test for defective design was inapplicable to the circumstances in the case).

favorable to her. Nonetheless, the defendant is certain to argue risk-utility to the jury and the case is likely to be decided on those grounds.

IV

CONSUMER EXPECTATIONS AND THE UBIQUITOUS RAD IN EVIDENCE

Five states defined defect based solely on the consumer expectations test: Kansas,⁵¹ Nebraska,⁵² Oklahoma,⁵³

⁵¹ The seminal cases adopting the consumer expectations test in Kansas are *Lester v. Magic Chef, Inc.*, 641 P.2d 353, 361 (Kan. 1982) and *Barnes v. Vega Indus.* 676 P.2d 761, 764 (Kan. 1984). In both cases, the Kansas Supreme Court held that a jury should be instructed on consumer expectations alone. In both, plaintiffs introduced a RAD. In *Delaney v. Deere & Co.*, 999 P.2d 930, 940 (Kan. 2000), in answering a certified question from the Tenth Circuit Court of Appeals, 1999 WL 458626 (10th Cir. Jan. 19, 1999), the court reiterated that Kansas was committed to the consumer expectation test, but said, “we also recognize the validity of risk/utility analysis as a guide in determining the expectations of consumers in complex cases.” *Delaney*, 999 P.2d at 944. The court further said it would allow “evidence of the feasibility of an alternative design in the trial of a design defect.” *Id.* at 945. In reviewing all reported state design defect cases, the author found none in which the plaintiff failed to introduce a RAD into evidence.

⁵² Nebraska adopted the consumer expectation test in *Rahmig v. Mosley Mach. Co.*, 412 N.W.2d 56, 79 (Neb. 1987) and further held that the plaintiff need not prove a RAD in order to make out a prima facie case of design defect. In reviewing all state design defect cases post-*Rahmig*, the author has found none in which the plaintiff did not introduce a RAD. Indeed, in *Rahmig*, the plaintiff introduced evidence of a RAD. *Id.*; see also *Pitts v. Genie Indus., Inc.*, 921 N.W.2d 597, 607 (Neb. 2019) (RAD offered); *Jay v. Moog Auto., Inc.*, 652 N.W.2d 872, 879–80 (Neb. 2002) (RAD offered); *Kudlacek v. Fiat S.p.A.*, 509 N.W.2d 603, 612 (Neb. 1994) (RAD offered).

⁵³ *Kirkland v. Gen. Motors Corp.*, 521 P.2d 1353, 1362 (Okla. 1974), is the lead case adopting the consumer expectations test for design defect. In reviewing the Oklahoma design defect cases, in each instance the plaintiff offered a RAD that would have avoided the harm. See, e.g., *Attocknie v. Carpenter Mfg.*, 901 P.2d 221, 222 (Okla. Civ. App. 1995) (RAD offered); *Stewart v. Scott-Kitz Miller Co.*, 626 P.2d 329, 330 (Okla. Civ. App. 1981) (RAD offered). It is interesting that in two cases the defendant was granted summary judgment, even though the plaintiff had offered a RAD, because the court found that the product did not disappoint consumer expectations. *Woods v. Fruehauf Trailer Corp.*, 765 P.2d 770, 774 (Okla. 1988) (RAD offered but was found not to have made a tanker more safe under the consumer expectation test than when fire was fed by gasoline spill while the plaintiff was filling the tanker); *Lamke v. Futorian Corp.*, 709 P.2d 684, 686 (Okla. 1985) (fire caused by cigarette where design claim was that chemicals were added to make the cigarette burn longer).

Maryland,⁵⁴ Nevada,⁵⁵ and Wisconsin⁵⁶ until 2015. In these jurisdictions in each reported state case the plaintiff introduced a RAD into evidence and there was no mention in the case that the introduction of a RAD was improper.

⁵⁴ Maryland adopted the consumer expectation test in *Halliday v. Sturm, Ruger & Co.*, 792 A.2d 1145, 1147–48, 1158 (Md. 2002). In that case, a three-year-old boy shot himself while playing with his father's handgun. The boy's father disregarded virtually every one of the warnings intended to prevent children from accessing the gun. The Plaintiff suggested a host of alternative designs that would have reduced the likelihood that a young child could fire the gun. The court embraced the consumer expectation test as a shield against liability and absolved the gun manufacturer of liability. The Maryland case law pre-*Halliday* held that design defect cases were to be decided on risk-utility grounds. In all of the design cases, the plaintiff introduced a RAD. See, e.g., *Nissan Motor Co. v. Nave*, 740 A.2d 102, 107 (Md. Ct. Spec. App. 1999) (RAD offered); *Ziegler v. Kawasaki Heavy Indus.*, 539 A.2d 701, 707 (Md. Ct. Spec. App. 1988) (RAD offered); *Troja v. Black & Decker Mfg. Co.*, 488 A.2d 516, 519–20 (Md. Ct. Spec. App. 1985) (RAD offered). There is a paucity of state case law in Maryland post-*Halliday*. Nonetheless, in all design cases that the author has been able to find, plaintiffs introduced a RAD.

⁵⁵ In *Ford Motor Co. v. Trejo*, 402 P.3d 649, 655 (Nev. 2017), the court rejected the defendant's request for a risk-utility (RAD) jury instruction in a case where the issue was the strength of the roof of a SUV in a roll-over situation. In a lengthy opinion, the court held that a RAD was not necessary in a design defect case and that Nevada adhered to the consumer expectation test. *Id.* at 655–57. The court said that the availability of a RAD was one factor to be taken into account in deciding whether a product's design met consumer expectations. *Id.* at 653–54. A search of all Nevada design defect cases reveals that in all the cases the plaintiff presented evidence of a RAD. That a RAD is not a formal requisite does not alter the fact that plaintiffs deem a RAD necessary to make out a credible design defect case. Indeed, in *Trejo*, extensive evidence was introduced by both parties as to whether a RAD was technologically and economically feasible. *Id.* at 657–58.

⁵⁶ As of 2011, Wisconsin requires proof of a RAD when a claimant alleges a design defect. WIS. STAT. § 895.047(1)(a). Up to that time, Wisconsin adhered to the consumer expectation test. See, e.g., *Morden v. Continental AG*, 611 N.W.2d 659, 667 (Wis. 2000) (manufacturer liable for negligent design and RAD offered); *Giese v. Montgomery Ward, Inc.*, 331 N.W.2d 585, 588–89 (Wis. 1983) (RAD offered); *Vincer v. Esther Williams All-Aluminum Swimming Pool Co.*, 230 N.W.2d 794, 796, 798 (Wis. 1975) (RAD offered); *Arbet v. Gussarson*, 225 N.W.2d 431, 434 (Wis. 1975) (RAD offered); *Derby v. Brenner Tank, Inc.*, 522 N.W.2d 274, 275 (Wis. Ct. App. 1994) (RAD offered). Despite holding that a RAD was not required, in *Sumnicht v. Toyota Motor Sales, U.S.A., Inc.*, 360 N.W.2d 2, 18 (Wis. 1984), the plaintiff introduced a RAD and the court found that evidence supported the availability of a RAD. Similarly, in *Green v. Smith & Nephew AHP, Inc.*, 629 N.W.2d 727, 733 (Wis. 2001), the plaintiff alleged the presence of high-protein latex powder in the latex gloves that caused her to suffer a serious allergic reaction. The plaintiff introduced evidence that low-protein latex gloves would have been effective without causing allergic reactions. *Id.* at 733–34. Although the court held that the consumer expectation instruction was correct, the fact remains that the plaintiff introduced evidence of a RAD. *Id.* at 759. In short, no Wisconsin design defect case from 1975 to present was found in which the plaintiff failed to introduce a RAD.

Although the cases often say that the plaintiff need not introduce a RAD, the trier of fact had before it the RAD. Twelve states allowed the plaintiff to proceed either under the consumer expectations test or risk-utility: Alaska,⁵⁷ Arizona,⁵⁸

⁵⁷ The lead case in Alaska adopting the two-prong test is *Caterpillar Tractor Co. v. Beck*, 593 P.2d 871, 876 (Alaska 1979) (RAD offered); *see also*, *Gen. Motors Corp. v. Farnsworth*, 965 P.2d 1209, 1213 (Alaska 1998) (RAD offered); *Dura Corp. v. Harned*, 703 P.2d 396, 401 (Alaska 1985) (RAD offered). No design case was found in which the plaintiff did not introduce a RAD.

⁵⁸ *Dart v. Wiebe Mfg.*, 709 P.2d 876, 878–80 (Ariz. 1985) (en banc) is the leading case adopting the two alternative tests for design defect consumer expectation and risk-utility. The court acknowledged that “while the consumer expectation test may sometimes work well in design defect cases, it provides no resolution for those cases in which ‘the consumer would not know what to expect’” *Id.* at 878. (citations omitted). A review of the cases reveals that in all design defect cases plaintiffs introduced a reasonable alternative design. *See, e.g.*, *Anderson v. Nissei ASB Mach. Co.*, 3 P.3d 1088, 1093 (Ariz. Ct. App. 1999) (RAD offered); *Hohlenkamp v. Rheem Mfg. Co.*, 655 P.2d 32, 34 (Ariz. Ct. App. 1982) (RAD offered). Although the Arizona courts continually make reference to the consumer expectations test as appropriate to some design defect cases, the author could find no design defect case in which a RAD was not introduced into evidence.

Connecticut,⁵⁹ Hawaii,⁶⁰ Illinois,⁶¹ Pennsylvania,⁶² New York,⁶³

⁵⁹ Connecticut adopted the two-prong test for defect in several lengthy opinions. See *Izzarelli v. R.J. Reynolds Tobacco Co.*, 136 A.3d 1232, 1235 (Conn. 2016); *Bifolck v. Phillip Morris, Inc.*, 152 A.3d 1183, 1188–89 (Conn. 2016); *Potter v. Chi. Pneumatic Tool Co.*, 694 A.2d 1319, 1326 (Conn. 1997). In each of the cases, the plaintiff alleged defective design, and in each the plaintiff introduced evidence of a RAD. The author found no case since 1997 in which the plaintiff did not introduce a RAD. The consumer expectation test has been limited in that “the product must fail to meet legitimate, commonly held, minimum safety expectations . . .” *Bifolck*, 152 A.3d. at 1203.

⁶⁰ Several Hawaii cases embrace the two-prong test for design defect: (1) consumer expectations and (2) risk-utility. In each case the plaintiff offered a RAD. See, e.g., *Acoba v. Gen. Tire, Inc.*, 986 P.2d 288, 304 (Haw. 1999) (RAD offered); *Ontai v. Straub Clinic & Hosp., Inc.* 659 P.2d 734, 742 (Haw. 1983) (RAD offered); *Brown v. Clark Equip. Co.*, 618 P.2d 267, 272 (Haw. 1980) (RAD offered); *Wagatsuma v. Patch*, 879 P.2d 572, 580 (Haw. Ct. App. 1994) (RAD offered). No design case was found in Hawaii in which the plaintiff did not offer a RAD.

⁶¹ The leading case on design defect in Illinois is *Mikolajczyk v. Ford Motor Co.*, 901 N.E.2d 329 (Ill. 2008). In that case the plaintiff sought to proceed solely on the consumer expectation test. *Id.* at 348. The defendant wanted the court to apply risk-utility balancing. *Id.* The question for the court was whether the consumer expectation test “trumped” risk-utility. *Id.* at 352. The court said:

Although we have declined to adopt section 2 of the Products Liability Restatement as a statement of substantive law, we do find its formulation of the risk-utility test to be instructive. Under section 2(b), the risk-utility balance is to be determined based on consideration of a “broad range of factors,” including . . . the nature and strength of consumer expectations regarding the product, including expectations arising from product portrayal and marketing,” as well as “the likely effects of the alternative design on production costs; the effects of the alternative design on product longevity, maintenance, repair and esthetics; and the range of consumer choice among products” . . . We adopt this formulation of the risk-utility test and hold that when the evidence presented by either or both parties supports the application of this integrated test, an appropriate instruction is to be given at the request of either party. If, however, both parties’ theories of the case are framed entirely in terms of consumer expectations, including those based on advertising and marketing messages, and/or whether the product was being put to a reasonably foreseeable use at the time of the injury, the jury should be instructed only on the consumer-expectation test.

Adoption of this integrated test resolves the question of whether the answer to the risk-utility test “trumps” the answer to the consumer-expectation test because the latter is incorporated into the former and is but one factor among many for the jury to consider.

Id. (citations omitted). For a full analysis of *Mikolajczyk*, see Twerski & Henderson, Jr., *The Triumph of Risk-Utility*, *supra* note 13, at 1073–1077. The practical effect of that decision is that if the plaintiff seeks to proceed under the consumer expectation test, the defendant can introduce risk-utility evidence and the jury will be given the integrated instruction. The defendant will invariably argue that the product under consideration meets the risk-utility standard. The only way for the plaintiff to rebut is to introduce a reasonable alternative design to demonstrate that the defendant’s claim is not valid. It is no surprise that post-

Mikolajczyk there is no design case in which the plaintiff did not introduce a RAD. Pre-*Mikolajczyk*, the Illinois courts applied the consumer expectation test. There also appear to be some cases where the courts applied both consumer expectation and risk-utility analysis tests. See *Calles v. Scripto-Tokai Corp.*, 864 N.E.2d 249, 256 (Ill. 2007) (“[T]his court has continued to employ these two tests [consumer expectation and risk-utility] when determining whether a product is unreasonably dangerous.”) (citing *Blue v. Envtl. Eng’g, Inc.*, 828 N.E.2d 1128 (Ill. 2005); *Hansen v. Baxter Healthcare Corp.*, 764 N.E.2d 35 (2002) (“separately analyzing whether an IV catheter connector was unreasonably dangerous under the consumer-expectation and risk-utility tests”); see also *Lamkin v. Towner*, 563 N.E.2d 449, 457 (Ill. 1990) (“A plaintiff may demonstrate that a product is defective in design . . . in one of two ways: (1) by introducing evidence 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) by introducing evidence that the product’s design proximately caused his injury and the defendant fails to prove that on balance the benefits of the challenged design outweigh the risk of danger inherent in such designs.”); *Dunham v. Vaughan & Bushnell Mfg.*, 247 N.E.2d 401, 403 (Ill. 1969) (considering both consumer expectation and risk-utility analysis). Nonetheless, in the overwhelming majority of cases, plaintiffs introduced a RAD. See, e.g., *Rios v. Navistar Int’l Transp. Corp.*, 558 N.E.2d 252, 256 (Ill. App. Ct. 1990) (RAD offered); *Cornstubble v. Ford Motor Co.*, 532 N.E.2d 884, 888 (Ill. App. Ct. 1988) (RAD offered); *Hayes v. Kay Chem. Co.*, 482 N.E.2d 611, 614 (Ill. App. Ct. 1985) (RAD offered).

⁶² *Tincher v. Omega Flex, Inc.*, 104 A.3d 328, 335 (Pa. 2016), is the seminal Pennsylvania case adopting the two-prong test for defect. *Tincher* overruled the much-maligned *Azzarello v. Black Bros. Co.* case. See *Azzarello v. Black Bros. Co.*, 391 A.2d 1020 (Pa. 1978), overruled by *Tincher*, 104 A.3d. *Tincher*, on its facts, alleged a design defect. 104 A.3d at 339. It is not clear from the decision whether the plaintiff on remand would be able to make out a case under the consumer expectations test. At trial both parties put in extensive evidence on risk-utility tradeoffs and the plaintiff clearly proffered a reasonable alternative design. *Id.* at 338. An examination of state cases citing *Tincher* reveals that in all classic design defect cases the plaintiff introduced a RAD. See, e.g., *Dunlap v. Fed. Signal Corp.*, 194 A.3d 1067, 1068, 1071 (Pa. Super. Ct. 2018) (RAD offered); *Am. Honda Motor Co. v. Martinez*, 2017 WL 1400968 at *2, *8 (Pa. Super. Ct. 2017) (RAD offered); *Webb v. Volvo Cars of N. Am., L.L.C.*, 148 A.3d 473, 476 (Pa. Super. Ct. 2016) (RAD offered). The author could not find a design case in which a RAD was not introduced. The only case in which a RAD was not introduced, *High v. Pennsy Supply, Inc.*, 154 A.3d 341, 351 (Pa. Super. Ct. 2017), is probably not a design case. In that case, plaintiffs were injured when exposed parts of their bodies came into contact with wet caustic cement and sought to recover under the consumer expectation test. The court noted that the design claim (defective cement) appeared to be a failure to warn claim.

⁶³ The premier case on design defect liability in New York is *Voss v. Black & Decker Mfg. Co.*, 450 N.E.2d 204, 205 (N.Y. 1983). In a lengthy opinion, the court set out multiple factors to be taken into account in making a risk-utility assessment in an action based on strict liability in tort. In *Denny v. Ford Motor Co.*, 662 N.E.2d 730, 733 (N.Y. 1995), the Court of Appeals held that in an action based on breach of the implied warranty of merchantability (U.C.C. § 2-314(2)(c)), a plaintiff could establish a case for design defect if the product fails to meet “the expectations for the performance of the product when used in the customary, usual and reasonably foreseeable manners.” *Id.* at 736 (footnote omitted). In an article by Paul D. Rheingold & Scott D. Kagan, *How to Prove the Defect in a New York Product Liability Case*, BILL OF PARTICULARS, no. 1, 2014, at 37, the authors declare that the “most significant hurdle for a plaintiff seeking to prove defect in

the design of a product is the requirement that under New York law, the plaintiff must demonstrate a reasonable alternative design [RAD]". Failure to do so will result in summary judgment for the defendant. *See, e.g.*, *Preston v. Peter Luger Enters., Inc.*, 858 N.Y.S.2d 828, 832 (App. Div. 2008) (affirming summary judgment for the Defendant because the Plaintiff failed to produce a RAD); *Rypkema v. Time Mfg. Co.*, 263 F.Supp.2d 687, 695 (S.D.N.Y. 2003) (granting motion to dismiss for failure to produce a RAD); *Stalker v. Goodyear Tire & Rubber Co.*, 874 N.Y.S.2d 632, 635 (App. Div. 2009) (noting failure to produce a RAD); *Sabater ex rel. Santana v. Lead Indus. Ass'n.*, 704 N.Y.S.2d 800, 805 (Sup. Ct. 2000) (granting the defendant's motion to dismiss the negligent product design claims); *Colon ex rel. Molina v. BIC USA, Inc.*, 199 F.Supp.2d 53, 84, 88–90 (S.D.N.Y. 2001) (reviewing the authority on the necessity of a RAD); *see also* Twerski & Henderson, Jr., *The Triumph of Risk-Utility*, *supra* note 13, at 1093 n.139 ("A substantial number of decisions set forth the requirement of a reasonable alternative design as a prerequisite for a prima facie case of defective design."); Michael Hoenig, *The Law of Manufacturing and Design Defect Liability*, in 1 NEW YORK STATE BAR ON PRODUCTS LIABILITY 1 (Goldberg & Freedenberg eds., 2019); NEW YORK PATTERN JURY INSTRUCTION § 2:200 (2018 ed.).

Several years later, in an article entitled *An Overlooked Weapon in Product Liability Lawsuits*, 90 N.Y. ST. B. ASS'N J. 21 (May 2018), Rheingold laments the fact that the plaintiff's bar has not made use of the consumer expectations test in design defect cases and cites several cases where New York courts have found a design defect based on failed consumer expectations. The first is *Bradley v. Earl B. Feiden, Inc.*, where the New York Court of Appeals held that it is sufficient that a defect in a new refrigerator caused a fire and there is no need to specify the defect. 864 N.E.2d 600, 602 (N.Y. 2007). That case is almost identical to *Speller ex rel. Miller v. Sears, Roebuck & Co.*, 790 N.E.2d 252, 255 (N.Y. 2003) (cited by the court in *Bradley*) where the court relied on RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 3. One can draw a circumstantial inference of defect (*res ipsa*) where a product fails to perform its manifestly intended function without proof of specific defect. *Miller*, 790 N.E.2d at 254–55. In any event, that case does not speak to design defect since the court says that the case involves a manufacturing defect. The second, *Duval v. Delta Int'l Mach. Corp.*, No. 1:13-CV-4270-6H 2015 WL 4522911, at *3, *7 (S.D.N.Y. July 27, 2015), is a design defect case in which the plaintiff pled both strict liability and breach of the implied warranty of merchantability. The plaintiff introduced credible evidence of a RAD and the court denied summary judgment on both causes of action, holding that under the consumer expectation test a RAD was not necessary. *Id.* at *3–4. The third, *Wojcik v. Empire Forklift, Inc.*, 783 N.Y.S.2d 698 (App. Div. 2004), the court held that even absent a RAD a court could find that a product was defectively designed because it failed to meet consumer expectations as to its safety. *Id.* at 700. After reviewing every reported state design defect case in the twenty-three years post-*Denny* in which the plaintiff alleged strict tort liability and/or the implied warranty of merchantability, only in *Wojcik* was a RAD not introduced.

Oregon,⁶⁴ Tennessee,⁶⁵ Washington,⁶⁶ California⁶⁷ and

⁶⁴ OR. REV. STAT. §30.920 (2007) adopts section 402A, including comments *a* through *m*, as the law governing products liability in Oregon. In *McCathern v. Toyota Motor Corp.*, 23 P.3d 320, 329–30 (Or. 2001), the Oregon Supreme Court said that it was bound by the legislative determination set forth in section 402A, comment I (consumer expectations test). The court then said:

Plaintiff acknowledges that evidence related to risk-utility balancing of that kind may be necessary to show that a product failed to perform as safely as an ordinary consumer would have expected. However, plaintiff disputes the Court of Appeals' holding that, under the consumer expectations test, a plaintiff *must* introduce such evidence. *See McCathern*, 985 P.2d at 811 (proof of safer practicable alternative design essential to consumer risk-utility theory). According to plaintiff, evidence related to risk-utility balancing, as described above, is required only under the now-defunct reasonable manufacturer test. *See Wilson v. Piper Aircraft Corp.*, 577 P.2d 1322[, 1326–27] (Or. 1978) (relying on *Phillip's* reasonable manufacturer test; requiring that, when risk-utility balancing and proof of design alternative are necessary, proof must include evidence that alternative design was practicable).

We agree that evidence related to risk-utility balancing, which may include proof that a practicable and feasible design alternative was available, will not *always* be necessary to prove that a product's design is defective and unreasonably dangerous, *i.e.*, that the product failed to meet ordinary consumer expectations. However, because the parties did not dispute that evidence related to risk-utility balancing was necessary in this case, we leave for another day the question under what circumstances ORS 30.920 requires a plaintiff to support a product liability design-defect claim with evidence related to risk-utility balancing of the kind discussed above.

McCathern, 23 P.3d at 331–32 (footnotes omitted).

In *McCathern* and in *all* subsequent design cases in Oregon, the plaintiffs introduced a RAD. *See Benjamin v. Wal-Mart Stores, Inc.*, 61 P.3d 257, 268 (Or. Ct. App. 2002). No design case was found in which a RAD was not introduced by the plaintiff into evidence. For a discussion of *McCathern*, see James A. Henderson, Jr. & Aaron D. Twerski, *Product Design Liability in Oregon and the New Restatement*, 78 OR. L. REV. 1 (1999); *see also Purdy v. Deere & Co.*, 386 P.3d 2, 8 (Or. Ct. App. 2016).

⁶⁵ Tennessee adopted a two-pronged test for defective design in *Ray ex rel. Holman v. BIC Corp.*, 925 S.W.2d 527, 528 (Tenn. 1996). The two tests are (1) the consumer expectation test and (2) the prudent manufacturer test. *Id.* at 530–31. The prudent manufacturer test requires risk-utility balancing. *Id.* at 531–32. In reviewing all the Tennessee appellate decisions (both in the Intermediate and Supreme Court), we found none in which the consumer expectation test played a decisive role. In other words, all the cases that relied on the consumer expectation test were classic *res ipsa* cases that would have been decided the same way under Section 3 of the RESTATEMENT OF TORTS: PROD. LIAB. *See Jackson v. Gen. Motors Corp.*, 60 S.W.3d 800, 802–03 (Tenn. 2001) (resolving a classic *res ipsa* case of seatbelt breaking when auto collided at a speed of 19–23 mph with a tree). If the case did not warrant a Section 3 inference of defect, the plaintiff was required to present a reasonable alternative design. *See, e.g., Brown v. Crown Equip. Corp.*, 181 S.W.3d 268, 276 (Tenn. 2005) (RAD proffered for stand-up forklift without escape door and issue of unreasonable danger for the jury); *Shoemake v. Omnicorp Int'l, Inc.*, 152 S.W.3d 567, 573 (Tenn. Ct. App. 2003)

Florida.⁶⁸ Prior to 2005, Ohio was in this camp.⁶⁹ Here, too,

(where the plaintiff used forklift capable of lifting 10,000 pounds as a lift for himself and claimed that the lift was defective in design because it did not have a personnel-lift attachment, court made mention of and then ignored the consumer expectation test and found that the plaintiff did not provide sufficient evidence of a reasonable alternative design and granted summary judgement to the defendant).

⁶⁶ By statute Washington provides for liability for defective design if there was a reasonable alternative design, WASH. REV. CODE ANN. § 7.72.030(a) (West 1998), or if the product failed consumer expectations, § 7.72.030(c)(3) (implied warranty). Almost all the Washington cases cite to the two-pronged test for defect. *See, e.g., O'Connell v. MacNeil Wash Sys. Ltd.*, 409 P.3d 1107, 1114 (Wash. Ct. App. 2017) (“In order to show that a product was unreasonably safe because of its design or lack of warnings, a plaintiff may rely on the risk-utility test . . . or the consumer expectations test.”) (internal quotation marks omitted); *Thongchoom v. Graco Children Prods. Inc.*, 71 P.3d 214, 217 (Wash. Ct. App. 2003) (“Two alternative tests may be used to establish that a product was not reasonably safe as designed: the risk-utility test and the consumer expectations test.”); *Bruns v. PACCAR, Inc.*, 890 P.2d 469, 474 (Wash Ct. App. 1995) (“A plaintiff may demonstrate [design defect] by using either a risk-utility analysis or a consumer expectation standard.”). For the most part in design cases, plaintiffs offer a RAD. *See O'Connell*, 409 P.3d at 1115; *Soproni v. Polygon Apartment Partners*, 971 P.2d 500, 503, 506 (Wash. 1999) (en banc); *Lenhardt v. Ford Motor Co.*, 683 P.2d 1097, 1098 (Wash. 1984) (en banc); *Anderson v. Dries & Krump Mfg.*, 739 P.2d 1177, 1183 (Wash. Ct. App. 1987); *Lamon v. McDonnell Douglas Corp.*, 576 P.2d 426, 428 (Wash. Ct. App. 1978). The few cases that allege defect design and do not set forth a RAD are cases that would be covered under the PROD. LIAB. RESTATEMENT § 3, cmt. b. *See, e.g., Pagnotta v. Beall Trailers of Or., Inc.*, 991 P.2d 728, 734 (Wash. Ct. App. 2000) (“[W]e conclude the consumer expectation rule applies here to avoid summary judgment as expert testimony of the exact defect is not required as a matter of law.”); *Bruns*, 890 P.2d at 476 (“When it is shown that a product failed to meet the reasonable expectations of the user the inference is that there was some sort of defect, a precise definition of which is unnecessary.”). The comment specifically provides that one may draw an inference of defect in a design defect case if the product fails to perform its manifestly intended function. Both of the cited cases fall into that category. *See also Higgins v. Intex Recreation Corp.*, 99 P.3d 421, 424 (Wash. Ct. App. 2004) (finding that snow tube that propels user backward down a snow-covered hill at 30 mph has low social utility and high risk of serious injury). This product would be covered under PROD. LIAB. RESTATEMENT § 3, cmt. e (product with low social utility and high risk may be defective without proof of a RAD).

⁶⁷ *See Soule v. Gen. Motors Corp.*, 882 P.2d 298, 305 (Cal. 1994); *Barker v. Lull Eng'g Co.*, 573 P.2d 443, 446 (Cal. 1978); discussion *infra* at note 71 to 83.

⁶⁸ *See Aubin v. Union Carbide Corp.*, 177 So. 3d 489, 512 (Fla. 2015). It should be noted that in the overwhelming majority of Florida cases the plaintiff proffered a RAD. *See, e.g., Sta-Rite Indus., v. Levey*, 909 So. 2d 901, 908 (Fla. Dist. Ct. App. 2004) (RAD offered); *Gen. Motors Corp. v. McGee*, 837 So. 2d 1010, 1017 (Fla. Dist. Ct. App. 2002) (RAD offered); *Brown v. Glade & Grove Supply, Inc.*, 647 So. 2d 1033, 1035 (Fla. Dist. Ct. App. 1994) (RAD offered); *Hyundai Motor Co. (Korea) v. Phillip*, 639 So. 2d 1064, 1065 (Fla. Dist. Ct. App. 1994) (RAD offered); *Stazenski v. Tennant Co.*, 617 So. 2d 344, 345 (Fla. Dist. Ct. App. 1993) (RAD offered); *LeMaster v. Glock, Inc.*, 610 So. 2d 1336, 1337 (Fla. Dist. Ct. App. 1992) (RAD offered).

⁶⁹ Liability for defective design is governed by OHIO REV. CODE ANN. §

almost without exception, plaintiffs introduced a RAD in every reported state case. California allows the plaintiff the two-prong test option.⁷⁰ However, if the plaintiff proceeded under the consumer expectation test alone, the defendant cannot introduce risk-utility evidence to rebut the plaintiff's claim that the product disappointed consumer expectations.⁷¹

V

THE EXCEPTIONAL CASES—CONSUMER EXPECTATIONS WITH NO RAD

In two states, California and Florida, there are indeed several cases where plaintiffs did not introduce a RAD where there was an allegation of design defect. Many of these cases involved asbestos.⁷² It does not require extensive citation to

2307.75(F) (West 2005) that became effective in 2005. It provides:

A product is not defective in design or formulation if, at the time the product left the control of its manufacturer, a practical and technically feasible alternative design or formulation was not available that would have prevented the harm for which the claimant seeks to recover compensatory damages without substantially impairing the usefulness or intended purpose of the product.

Whether a product is defective in design is to be determined by a risk-benefit test set forth in § 2307.75(A)–(C).

A prior version of the statute, § 2307.75(A)(2), allowed a plaintiff to recover if the product design did not meet consumer expectations. *See* Civil Procedure–Tort Reform Act, 2001 Ohio Laws File 26, § 2307.75(A)(2) (2001). Under the revised version of the statute consumer expectations is one of many considerations to be taken into account in undertaking a risk-benefit analysis. *See* OHIO REV. CODE ANN. § 2307.75(B)(5). Thus, there is no longer a stand-alone consumer expectation test for design defect. Even under the previous statute, the author could not find a design case where the plaintiff did not put into evidence a RAD. *See, e.g.,* *Leichtamer v. Am. Motors Corp.*, 424 N.E.2d 568, 572 (Ohio 1981) (RAD offered); *Zigler v. Avco Corp.*, 846 N.E.2d 547, 554 (Ohio Ct. App. 2005) (RAD offered).

⁷⁰ *See supra* note 67.

⁷¹ *See infra* notes 72–84.

⁷² *See Baeza v. Special Elec. Co.*, B264220 2016 WL 7387226, at *1 (Cal. Ct. App. Dec. 21, 2016); *Saller v. Crown Cork & Seal Co.*, 115 Cal. Rptr. 3d 151, 157 (Cal. Ct. App. 2010); *Garza v. Asbestos Corp.*, 74 Cal. Rptr. 3d 359, 360–61 (Cal. Ct. App. 2008); *Cunningham v. Buffalo Pumps, Inc.*, 2008 WL 4966519, at *1 (Cal. Ct. App. Nov. 24, 2008); *Jones v. John Crane, Inc.*, 35 Cal. Rptr. 3d 144, 148 (Cal. Ct. App. 2005); *Arena v. Owens-Corning Fiberglas Corp.*, 74 Cal. Rptr. 2d 580, 584 (Cal. Ct. App. 1998); *Morton v. Owen-Corning Fiberglas Corp.*, 40 Cal. Rptr. 2d 22, 22–23 (Cal. Ct. App. 1995); *Sparks v. Owens-Ill., Inc.*, 38 Cal. Rptr. 2d 739, 739 (Cal. Ct. App. 1995). It is interesting to note that Florida adopted the consumer expectation test in an asbestos case. *See Aubin*, 177 So. 3d at 510. The *Aubin* court acknowledged that under the PROD. LIAB. RESTATEMENT § 2, cmt. e, a RAD is not required if a product is “manifestly unreasonable” in that “the extremely high degree of danger posed by its use . . .

make the point that asbestos is not just another products liability case. Courts have held manufacturers of asbestos to a standard that is *sui generis*.⁷³

California appears to differ from almost all jurisdictions in one significant manner. They have taken the position that a plaintiff, by basing her claim entirely on consumer expectations, can prevent the defendant from introducing risk-utility evidence to show the jury that its product is, in fact, safer than any other alternative. The source for this view stems from *Soule v. General Motors Corp.*,⁷⁴ a case that sets forth the parameters of the two-prong test for defect in California. The court said that if a plaintiff is successful in establishing that a product failed the consumer expectation test, “[t]he manufacturer may not defend a claim that a product’s design failed to perform as safely as its ordinary consumers would expect by presenting expert evidence of the design’s relative risks and benefits.”⁷⁵ In a telling footnote to the above statement, the court said:

For example, the ordinary consumers of modern automobiles may and do expect that such vehicles will be designed so as not to explode while idling at stoplights, experience sudden steering or brake failure as they leave the dealership, or roll over and catch fire in two-mile-per-hour collisions. If the plaintiff in a product liability action proved that a vehicle’s design produced such a result, the

so substantially outweighs its negligible social utility that no rational, reasonable person, fully aware of the relevant facts, would choose to use . . . the product.” Thus, rejection of RAD in asbestos cases is quite understandable.

⁷³ For example, New Jersey held asbestos manufacturers liable for risks that were scientifically unknowable at the time the defendant distributed this product in *Beshada v. Johns-Manville Prods. Corp.*, 447 A.2d 539, 548 (N.J. 1982). The court retreated from that position in *Feldman v. Lederle Labs.*, 479 A.2d 374, 388 (N.J. 1984), holding that its decision in *Beshada* was limited to asbestos only. Similarly, the economic loss rule which has been widely adopted throughout the country does not apply to asbestos cases. See PROD. LIAB. RESTATEMENT § 21, cmt. e. The author does not seek to imply that in California and Florida the consumer expectation test is limited to asbestos cases. However, in the more classic design cases, plaintiffs have regularly offered a RAD in evidence. See, e.g., *Pannu v. Land Rover N. Am., Inc.*, 120 Cal. Rptr. 3d 605, 612–13 (Cal. Ct. App. 2011) (offering a reinforced roof structure as a RAD in an SUV design case); *Gordon v. Nissan Motor Co.*, 88 Cal. Rptr. 3d 778, 787 (Cal. Ct. App. 2009) (RAD offered). Similarly, in most Florida design cases plaintiffs have introduced a RAD. See *supra* note 68.

⁷⁴ *Soule v. Gen. Motors Corp.*, 882 P.2d 298, 308–09 (Cal. 1994). The two-prong test for design defect was originally propounded in *Barker v. Lull Eng’g Co.*, 573 P.2d 443, 455–56 (Cal. 1978).

⁷⁵ *Soule*, 882 P.2d at 308.

jury could find forthwith that the car failed to perform as safely as its ordinary consumers would expect, and was therefore defective.⁷⁶

Since *Soule*, the California courts have struggled with the question as to what facts support legitimate consumer expectations as to product performance.⁷⁷

A recent case demonstrates the problem. In *Romine v. Johnson Controls, Inc.*,⁷⁸ an injured driver brought suit against Nissan when, as a result of the force of collision with her car, the seat back collapsed causing her head to strike the vehicle's back seat rendering her a quadriplegic. The collision causing the plaintiff's injury was only one of a series of chain collisions brought about when a third-party driver slammed at high speed into a car stopped in traffic on a freeway exit ramp. In affirming a jury verdict for the plaintiff, the court said that "[c]onsumers have expectations about whether a vehicle's driver's seat will collapse rearward in a rear-end collision, regardless of the speed of the collision."⁷⁹ The defendant argued unsuccessfully that the consumer expectations test was inappropriate for such a violent collision since there are no expectations as to how a seat will perform in such a violent crash.⁸⁰ The defendant also sought to introduce risk-utility evidence to show that any alternative seat would be less safe and the seat as designed provided the optimum level of safety.⁸¹ The court, relying on *Soule*, denied them the opportunity to do so. The bottom line from that holding is that consumers have a right to expect that an automobile manufacturer would produce a car that in actuality provides *less danger and greater safety* than the car that is the subject of litigation.⁸² Most

⁷⁶ *Id.* at 305 n.3.

⁷⁷ *See, e.g.*, *Bresnahan v. Chrysler Corp.*, 38 Cal. Rptr. 2d 446, 451 (Cal. Ct. App. 1995) (holding that the consumer expectations test applies when an airbag inflated in a low speed collision forcing the plaintiff's arm to strike the windshield; the defendant, auto manufacturer cannot defend risk-utility grounds); *Pruitt v. Gen. Motors Corp.*, 86 Cal. Rptr. 2d 4, 6 (Cal. Ct. App. 1999) (finding consumer expectations test does not apply on facts similar to *Bresnahan*).

⁷⁸ *Romine v. Johnson Controls, Inc.*, 169 Cal. Rptr. 3d 208, 213 (Cal. Ct. App. 2014).

⁷⁹ *Id.* at 219–20 (emphasis added) (footnote omitted).

⁸⁰ *Id.*

⁸¹ *Id.* at 220.

⁸² The author was consulted by the defendant in a similar California case dealing with the ability of a seat to withstand a high-speed collision. *Gueffroy v. Audi AG*, No. 34-2013-00146684 (Cal. App. Dep't Super. Ct.) (dismissed August 15, 2016). It is worth noting that the defendants sought to introduce a poll

courts that embrace the consumer expectations test disagree and will allow a defendant to introduce risk-utility evidence as relevant to consumer expectations.⁸³

In short, except for California, whether a RAD is required or not, the reality is that the availability of a RAD will become the crucial determinant for prosecuting a successful design defect case. In the overwhelming majority of cases, plaintiffs will make the RAD the central focus of their cases. And even if they don't, defendants will introduce the lack of availability of a RAD in defense to the consumer expectation claim of the plaintiff.⁸⁴

undertaken by Daniel M. Oppenheimer of UCLA seeking to determine whether consumers actually have expectations about seat performance in a 50-mph collision. The study concluded consumers do not appear to have true beliefs or expectations about how a car seat will behave in such a high-speed collision. A copy of the study is available from the author of this article. The California trial court did not rule on the admissibility of the study since the case was settled. See Notice of Conditional Settlement, *Gueffroy*, No. 34-2013-00146684, ROA No. 354.

⁸³ See, e.g., *Aubin v. Union Carbide, Corp.*, 177 So. 3d 489, 511 (Fla. 2015).

While we conclude that the Third Restatement's risk utility test and establishment of a reasonable alternative design mandate are not requirements for finding strict liability, we note that nothing precludes the plaintiff in proving his or her case from showing that alternative safer designs exist—or for that matter precludes the defendant from showing that it could not have made the product any safer through reasonable alternative designs.

Id. (emphasis added);

The consumer expectations test is that standard in Kansas for determining whether a design defect exists. However, we also recognize the validity of risk/utility analysis as a guide in determining the expectations of consumers in complex cases. In *Potter v. Chicago Pneumatic Tool Co.*, [694 A.2d 1319 (Conn. 1997)], the Connecticut Supreme Court upheld the consumer expectations test but authorized the incorporation of risk utility factors to help the jury in its determination of what an ordinary consumer would reasonably expect. [694 A.2d at 1333–34]. The *Potter* court quoted the Supreme Court of Washington in *Seattle-First Nat'l Bank v. Tabert*, 542 P.2d 774, 779 (Wash. 1975): "In determining the reasonable expectations of the ordinary consumer, a number of factors must be considered. The relative cost of the product, the gravity of the potential harm from the claimed defect and the cost and feasibility of eliminating or minimizing the risk may be relevant in a particular case. In other instances the nature of the product or the nature of the claimed defect may make other factors relevant to the issue.

Delaney v. Deere & Co., 999 P.2d 930, 944 (Kan. 2000); see also *Mikolajczyk v. Ford Motor Co.*, 901 N.E.2d 329, 352–53 (Ill. 2008) (holding that when risk-utility evidence is introduced by either party the jury should be instructed on risk-utility, which includes consumer expectations as one factor).

⁸⁴ It is worth noting that four decades ago Dean Page Keeton addressed this issue. He said:

A decade ago, on the tenth anniversary of the Products Liability Restatement, Professor Henderson and the author wrote an article heralding “The Triumph of Risk Utility.” The author stands behind their research that a majority of states demand a RAD as a requirement to make out a prima facie case of design defect. Now, one decade later, one can say with confidence that whether courts demand a RAD or not is of minor importance, for whatever theory a court adopts the case will be decided on whether there was a reasonable alternative design available.

It is quite clear that to the extent that a maker knows, or in the exercise of ordinary care should know, of a risk or hazard that users may not discover or appreciate, liability results for breach of the duty to disclose what a reasonable person would disclose. This ground of liability protects users and consumers to a considerable extent from harm resulting from unappreciated dangers. It is submitted, however, that an inquiry as to whether the danger in fact of the design outweighed the benefits of the design would better protect users and consumers, without placing an undue burden on manufacturers and suppliers. The court’s primary justification for the retention of the contemplation test is the ease with which the plaintiff can establish a design defect under this test by circumstantial evidence. If a claimant proves that a product fails under circumstances the ordinary purchaser or user would not have expected, a case has been made. That is clearly so, but the question is, should it be so? I think not. If the court would permit the defendant to show under a risk-utility analysis by way of rebuttal that it would not be feasible, then the position would be supportable.

W. Page Keeton, *supra* note 16, at 310 (footnotes omitted).